Sustainable

Slum Upgrading in Urban Area

W110 - Informal Settlements and Affordable Housing

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slum **upgrading** in urban area

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FOREWORD

International Council for Research and Innovation in Building and Construction (CIB) was established in Holland in the 1950s. The CIB Working Commission W110 Informal Settlements and Affordable Housing (ISAH) has joint coordinator for Asia, Africa and Latin America. The ISAH-Indonesia is a Network for researcher in Indonesia who conducts research in the realm of ISAH. The CIB- W110 Meeting and Conference "Sustainable Slum Upgrading in Urban Area" which would be conducted in Sebelas Maret University (UNS) Surakarta Central Java Indonesia is the third conference of ISAH-Indonesia. This is organized by the Study Program of Urban and Regional Planning Department of Architecture UNS; Unit of Research and Empowerment of Housing and Human Settlements Resources PIPW LPPM UNS by cooperation with the Department of Architecture Institute Technology Sepuluh Nopember (ITS) and the CIB-W 110 ISAH Network by the 16 th of April 2009 in UNS Surakarta.

The purpose of the conference is to obtain network and International exchange and cooperation in research and innovation, particularly in Informal Settlements and Affordable Housing. Therefore the discussion in this book covers the following topics:

1. Sustainable concept of planning, housing policy and approach for slum upgrading in urban area
2. Stakeholders role in transfer of information, technology and empowerment to the community to improve lives in urban slum area
3. Sustainable financing and economic development for Slum Communities in the Urban Area.

Special thanks are directed to Prof Happy Santosa from ITS; Dr. Amira Osman from University of Petronia- South Africa and Prof Liana Arrieta de Bustillos from University of Venezuela for their contribution (invited paper). Thanks are also directed to Prof Happy Santosa (ITS) as a Steering Committee and Ir. Winny Astuti, M.Sc, Ph.D as an organizing committee (UNS). Appreciations and thanks are also directed to all the writers in this book; all participants of the conference and all committee members who work totally for the conference.

Thank you.

Dr. Ir. Wim Bakens
CIB Secretary General - The Netherlands

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INVITED PAPER

INVITED PAPER

Sustainability of Neighborhood Upgrading and Shelter Sector Project (NUSSP)

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ABSTRACT

A high level of urbanization has significantly caused **the poor and slum shelters** in many urban areas. NUSSP is intended to help the government in reducing the urban poverty through partnership with the government, private sector and community Institutional. The direct beneficiaries are the poor people on the slum areas.

The NUSSP objectives are: 1. Improve neighborhood quality for the low income community, 2. Facilitation to access housing improvement through housing micro finance and 3. Building capacity of local government and community in formulating participative plan.

Implementation NUSSP **involving the community** from the planning phase, implementation phase to the monitoring and supervision phase – which conducted with participative approach, and developing institutional community and grant supported by central and local Government

Involvement of the community enhances ability and awareness of the community in growing **sense of ownership** of the infrastructure asset which they have planned and built through NUSSP project. Based on the project, the built infrastructure assets really determine the sustainability of the shelter and housing improvement.

To build the capacity of community in operation and maintenance of the built infrastructure asset, besides facilitating trainings in construction skill, Operation and maintenance, NUSSP also establish advocacy and strengthen

institutional of Maintenance and Operation Managing Team, KPP which is the beneficiary group and user which is hoped to increase the community ability to finance the operation and maintenance cost on their own.

The development of infrastructure through NUSSP has a **significant impact** on the economic condition of community in slum area because the economy activity, ease of access to information, health, education and other social facilities.

1. BACKGROUND

Based on the BPS data's, March 2008, the number of poor people is 34.96 million people or 15.42% of Indonesian population, (below poverty level which is expenditure of Rp 188,931 per capita per month). It is less than the number in March 2007 which is 37.17 million or 16.58% of national population by declining of 2.21 million. The poor population in rural areas has declined 1.42 million, and 790 thousand in urban areas.

The increase of urban population or urbanization basically is caused by three factors; natural growth – birth rate higher than death rate, reclassification of rural settlements into cities, and migration from rural to urban areas. In recent decade, the birth rate in Indonesia had been able to be controlled; therefore this factor is not a major concern. The last two factors are slightly increasing along with the industrialization in Indonesia. The development of industrial areas in cities (urban perimeter) further attracts many rural inhabitants to move to urban area. Otherwise, the economic pressure to farmers live in non-urban areas has forced them to adapt to urban livelihoods, surely changing non-urban land into urban land.

2. URBAN SHELTER SITUATION IN INDONESIA

The high level of urbanization has significantly caused the flourishing new slum settlements in various urban areas. The pace of urbanization without adequate space and infrastructures has brought settlement into over capacity and tend to become under serviced. Typically slum area must deal with problems such as: 1) size and width of the building does not meet the health and social standard; 2) high density between buildings which is prone to fire; 3) lack of potable water supply; 4) lack of capacity of electricity system; 5) poor drainage system; 6) inadequate neighborhood path system; 7) and very limited sanitation facilities. Those conditions lead to more health and social problems such as diseases, conflicts and crimes, and low economic productivity of the citizens.

Moreover, as a result of poverty in urban area there are people who by force build their dwellings on government lands or individual lands. Although

they understand that they encroach on other's property right, they reluctant to move away. Usually the land which they encroached is on strategic location, proximate to their source of income.

The vision of housing and settlement development in Indonesia is that every citizen able to fulfill their needs of decent and affordable housing in a safe, just, civilized, productive house, and develop sustainability, empowering each other in achieving regional development. In order to achieve this vision, there are three policies: 1) institutionalizing system of housing and settlement delivery with involvement of the community; 2) Realizing housing delivery as one of basic human rights to all level of community; and 3) Development of decent, civilized, and just human settlements.

These policies, in the era of autonomous decentralization in Indonesia, face new challenges. Inherent with the autonomous local government is setting priorities for local budgets. The challenge comes from the local governments which have not considered planning in housing and settlement development as priority, especially for the low income communities. Moreover, there is a weakness in relating between planning, budgeting and lack of capacity for implementing policies in local governments.

So far, the efforts for relieving urban slum issues have not shown a significant decrease in the number of urban slum area. The government in the past has undergone projects for urban slum neighborhood improvement. Though, several models already developed, none have been able to use as reference of pro-poor urban development – institutionally. Besides that, the urban poor – particularly those working in "informal" sectors – is difficult to access credit for built or buy a house or improve their existing house.

The weakness in settlement planning, urban development, and management system, and unavailability of access for the urban poor to the housing financing system are the reasons for the increasing of urban slum neighborhoods, and altogether it reflects the perspectives and concept which create urban planning and management system. One perspective is that poverty, income disparity, and urban slum just an excess of development, and government must responsible; on the other side, housing is regarded as individual needs. Both perspectives should be clarified as a whole and comprehensively. In response to the aforementioned problems, NUSSP offers one alternative solution as a concrete and comprehensive way.

3. NEIGHBORHOOD UPGRADING AND SHELTER SECTOR PROJECT

Considering the limited capacity of government in providing budget, either at national level and local level, for the slum neighborhood improvement programs, therefore government carried out Neighborhood Upgrading and Shelter Sector Project (NUSSP) with funding from Asian Development Bank (ADB) loan. From this project, the government is expected to increase their

capacity with synergic partnership with citizens in bringing slum problems to and end.

The Neighborhood Upgrading and Shelter Sector Project is using Tridaya approach. Tridaya approach is turn into action of: 1) empowerment of local government and community by delivering trainings and ongoing assistance; 2) optimization of neighborhood facilities through neighborhood upgrading and housing refurbishment by giving access for housing micro credit; and 3) local community economic empowerment by channeling this project with other related projects in that particular location.

The general objective of NUSSP is to help Government in reducing urban poverty level by partnership between government, private sector, and civil society. In detail, the objectives of this project are: 1) Improved quality of neighborhood by providing resources to the Local Government in partnership with citizens and private sectors; 2) Facilitation to the low-income community to access housing micro-credit for house improvement or development; 3) Increase capacity of Local Government and citizen in formulating participatory planning emphasized in harmonious role between public, private, and Local Government.

NUSSP is implemented in four components: 1) Improve the planning and management system to upgrade and develop new sites for the urban poor; 2) Improve access to shelter finance by the poor through Central Financial Institution and Local Financial Institutions or their branches; 3) Upgrading of poor neighborhoods and develop new sites for the poor; 4) Strengthened Sector Institutions to deliver the program.

The agenda of NUSSP implementation is a process of building mediations and facilitations. In community empowerment context, NUSSP facilitation process is carried out according to the Community Development principles. Local communities are organized. The community organization works in partnership with local government (municipality) and private sector that provide funding and technical expertise. Collectively, community is able to decide project which will directly or indirectly bring good impacts for their lives.

3.1 Activities

In NUSSP implementation, citizens are actively involved since the planning phase, implementation phase, toward monitoring and supervision phase, which overall are participative. Involvement of citizens is started with preliminary socialization that aiming at giving information about NUSSP and building critical awareness and understanding of the community so that they will be willing to carry out subsequent activities.

The next activity is community meeting in small scale, involving several local citizens in the particular kelurahan (district) to discuss information about NUSSP which has been received beforehand from the preliminary socialization. In this process, facilitator team identifies at least 3 persons from community volunteers as Community Cadre (Tenaga Penggerak Masyarakat). These Community Cadres will be trained by Oversight Consultant experts and organized by facilitator team.

Subsequently, community meetings are held regularly in larger scale, discussing issues about community institution and leadership. These meetings are expected to result in overall agenda of community which is realistic according to community awareness and understanding on current problems. A community institution with collective leaders is then established, which called Community Self-help Organization (CSO). Until 2008, 802 (eight hundred and two) CSOs has been established in NUSSP target location.

After community institutions been established and trainings been delivered, citizens are obliged to conduct Community Self-Survey of their neighborhood (kampung). The result of this self-survey is maps and profiles low-income community in the kelurahan for each slum area. Profiles of community comprise of condition of infrastructure and houses, potency of human resources, and the needs of citizens for improvement of their neighborhood. This maps and profiles are further followed up with participatory planning process and the final result is Neighborhood Upgrading Plan (NUP).

According to formulated NUP, community itself who deliver the implementation starting from the procurement of materials, construction works, and operation of the built infrastructure. The monitoring is also conduct by the citizens itself. Involvement of community is emphasized in NUSSP with the intention of growing the community sense of ownership of the built infrastructures. This is very essential for the sustainability and continuity of neighborhood upgrading programs.

In the process of NUP formulation and in the implementation of neighborhood and houses upgrading, CSO seeks advice from the Local Government and the result is integrated into the city programs, with mediation and facilitation of Oversight Consultant and Local Coordinating Office.

On the other hand, Local government is facilitated to formulate their planning document in housing and human settlement development which is more pro-poor. It consists of the formulation of City Shelter Strategy, and Spatial Plan for Shelter Strategy. The process of formulation City Shelter Strategy goes through several public meetings, with the purpose to integrate the citizens' aspiration about housing and settlement development into the city program.

3.2 Trainings and Capacity Building

Relevant trainings, courses and seminars are conducted for the local government personnel. Several trainings and courses have been conducted with the aim to increase capacity in project management, including Management Information System (MIS), and Geographical Information System (GIS) – which should be integrated with Local Planning System.

In order to develop skills of the community members, several trainings are carried out: basic training, strengthening training, and on the job training. Basic training comprise of Community Cadre training, CSO Basic training, financial management training for Financial Management Unit (FMU), specific training for Neighborhood Management Unit (NMU), and strengthening trainings. During operation and maintenance of the built assets (infrastructure), besides intensive assistance from facilitators, community also received training in Asset Operation and Maintenance.

A team called the Operation and Maintenance Management Team consists of community members who use and benefits from the assets, will manage the operation and maintenance of the built assets (infrastructures). With the community having skill and knowledge about operation and maintenance, it is expected that assets can reach its economic age. Besides technical skill, the team is expected to be able to finance reparation for light damages independently. The source of fund can be collected in a form of toll collected from the beneficiaries, and the amount is determined in the community meeting.

3.3 The stakeholders

As mentioned in the preceding paragraphs, NUSSP involve at all level of stakeholders – from national government to local government and community level. The institutional arrangement of NUSSP management can be describe as follow. The executing agency of NUSSP is Ministry of Public Works – Directorate General of Human Settlements. The EA is assisted by a team of National Management Consultant. While at local level, a Local Coordinating Office, which is from relevant Local Technical Agency (Dinas), is responsible for the coordination, supervision of the project in their city. There are 32 Municipalities implement NUSSP, in 17 provinces. Several LCO from nearby cities are helped by a team of Oversight Consultant in the project implementation. The OC team assigned a City Coordinator for each city and a facilitator team. This facilitator team is the closest to the community; they assist the community for technical matters and deliver the trainings.

Source of funding of NUSSP is soft loan from ADB to the Ministry of Public Works. While Local Governments receive the fund for upgrading as

grant from Central Government, but they must provide counterpart funding from their Local Budget (APBD). The amount of counter part funding is according to the fiscal capacity of each Local Government based on the Ministry of Finance. Besides counterpart funding, LG also have to prepare budget for the formulation of City Shelter Strategy, monitoring and evaluation of the subproject (upgrading) in their area, and other operational requirements.

4. OUTCOMES AND IMPACTS

Infrastructure development built through NUSSP has significant impact to the lives of the community in increasing income of low-income community who live in the slum area. Many locations where NUSSP is implemented have felt the impact of improved access of transportation; access of information; and access to health, education, and other basic social facilities.

Since the implementation of NUSSP in 2005 up to 2008, especially for upgrading sites and community capacity building (institutional development), in many locations is found creative and innovative activities of the community in managing NUSSP implementation. Those activities bring considerable positive impact, furthermore able to promote changes in community life style. Thus the lives of citizen improve in many aspects – economic, social, health – and become more dynamic and developed.

These practices need to be explored, particularly on the factors that support success of activities and dynamics of the participants in overcoming various problems which emerges. These practices and the outcomes are also valuable as lesson-learned and example for other participants in different cities. They could be used for analysis for the policy makers, viewers, and other stakeholders in designing and developing similar programs in the future.

For example, in Kelurahan Siantan Hulu, Pontianak; development of pathway above marsh land (called the hanging-cast / cor gantung) has give a great impact, more than just human transportation matter. The 465 meters long pathway is accessible by two-wheel vehicle, thus make easier for transporting goods from outside the kampung. In two years, the pathway has brought significant economic impact, indicated by multiplying number of warungs (small grocery stores) from 2 to 6. This ease of access has also increased the interest to build houses, proven with 10 newly built houses. This condition has consequences on the double of land price and house price compare to the price in 2006. Aware of the importance of cor gantung, community regularly maintain the pathway by cleaning it from garbage and grass, particularly on the supporting wood post.

Another example is water supply pipe installation in Kelurahan Laloeha, Kabupaten Kolaka. Responding to limited clean water supply during the dry

season and the expensive of local Water Supply Company (PDAM), with facilitation of NUSSP the citizen determine to flow water from the upstream of Pondiu river which is 2,5 kilometers away from the settlement. Near the water source, a water tank is built with installation of pipe to flow the water to four public water valves distribute in two neighborhoods (dusun) in Kelurahan Laloeha. In the development, some citizens facilitated by Independent CSO built pipe network from the public water valves to their own houses on their own expenses. For the maintenance each household is tolled Rp 5.000 per month. This value is much smaller than the cost for buying clean water from PDAM (Rp 50 thousands to 70 thousands per month per household). Up to now, clean water supply pipe in Laloeha not only covering the needs of local citizens but also other surrounding kelurahan; in wet season and in dry season.

Awareness and willingness to provide maintenance funding is also shown by citizens of kelurahan Morokrembangan Kota Surabaya. Through NUSSP, citizens are facilitated to renovate a public toilet (MCK) with 4 toilets which had been unusable for a long period. Thus they use the nearby river as a place for defecation. With NUSSP funding, the proposal for the public toilet renovation is carried out; including lighting, clean water installation from PDAM and room for the caretaker. For maintenance cost of the facility, electricity cost, water supply cost, and caretaker wage, each user must pay Rp 3.000 for each usage. Every month is collected Rp 400 thousands on average at the User and Maintainer Group (Kelompok Pengguna dan Pemelihara / KPP). The awareness and willingness of the citizens to pay the toll is to avoid the same damage that causes the facility to become inoperative for a long time.

5. KEY FEATURES OF NUSSP

NUSSP is a participatory project. This project is an alternative approach of housing and neighborhood delivery system to provide livable neighborhood, especially for the low income community. The already developed system is ‘formal’ development by developers and the citizen buy – usually with housing credit facilitation from the bank. This system builds houses to supply new housing demand. While NUSSP use a different approach. The deteriorating neighborhood is improved – with a big share of self-build. Community themselves identify their needs and priority, which will be built according the scale of priority.

There are three main features in NUSSP. First is the participatory process, which is the method in all implementation of upgrading from planning to post construction (operation and maintenance). Second is building and strengthening community organization as a place for the process to take place at community level. Third is changing paradigm of

Local Government as the motor in settlement development and strengthening its capacity

5.1 Community Participation

The participatory process could give impact in budget efficiency. With the available budget, community themselves decide what to build. Therefore the built infrastructure and facility would answer the main necessities of local citizens. At the end, citizens who involved in planning process will build sense of ownership and willingness to maintain the built infrastructures. And this could prevent heavy damages that need costly reparation which usually funded by local government.

Improved conditions of access roads in many locations bring impact on the economic improvement of community, for examples rise in land price. Also there is improved health condition after the installation of water supply and development sanitation facilities.

5.2 Community Organization

Since from the beginning of pre-construction to post-construction process the community is continually involved, thus they need an organizing body. In a participatory project like NUSSP, community institution is an essential social capital.

Citizen which organized in the CSO is a foundation for building a civil society. CSO in the future, even after NUSSP has ended, should be institutionalized in the city planning system – as an integral part of participatory planning system. CSO should be accustomed to participatory planning procedures, like Musrenbang Kecamatan, and able to speak their needs and aspiration to the Local Government. After the reformation of democracy process in Indonesia, this kind of practices must be further developed and evaluated.

5.3 Strengthening Local Government

We are aware that each Local Government has their priorities in budgeting the Local Income and Expenditure Budget (APBD). Many Local Governments have not made housing and settlement as their priority, thus budget for infrastructure maintenance is insufficient.

NUSSP offer an alternative for tackling the urban slum settlement problems – besides the already developed pattern of housing delivery system. Not only grant in form of infrastructure, Local Government obtain

empirical experience in formulating participatory housing and settlement development strategy and program. The output is a City Shelter Strategy which is pro-poor and applicable.

6. CONCLUSIONS

Neighborhood Upgrading and Shelter Sector Project with the participatory approach give results in these key outcomes:

1. Positive impacts on the lives of beneficiaries in the economic, health, and social aspects.

2. Build a clean, healthy, and productive behavior of the community. This behavior is important for the efficiency of local maintenance budget of the built infrastructure.

3. Local Government capacity strengthening to deliver the project with participatory approach, particularly in housing and settlement development.

NUSSP is carried out only by 32 Municipalities in 17 Provinces in Indonesia. It is too early to judge the success of this project. Next, for the scaling up and sustainability of similar projects one thing to be emphasized in the implementation of such projects is that infrastructure built in this kind of project is not the final goal, instead it is only one of the means to get to the main goal – sustainability in upgrading projects.

INVITED PAPER

Slum and Squatter Settlements in Surakarta
Institutional Constraints and Potencies for Self-help Housing Development

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ABSTRACT

The first goal of the seven goals of MDGs Indonesia is "Reduction of Poverty and Hunger. This goal is based on the condition that in 2003 there were 17,4% people live under the poverty line, which is targeted to be 7.5% in the year of 2015. In fact, most urban poor live in slum area in the deteriorated environment. In Indonesia, it shows that in the year of 2000, there were 47.500 ha of Slum Area spreading up in more than 10.000 location spots. Surakarta has also faced the problems of slum area. In fastening the effort for slum eradication, the major of Surakarta has introduced the Policy of "City without Slums in the year of 2010".

The purposes of the research are: firstly, to explore the characteristics of slum and squatter settlements in Surakarta; secondly, to explore the institutional constraints related to implementation of housing policy especially self-help housing policy; and finally, to recommend the institutional potencies for alleviating the problems of slum and squatter settlements in Surakarta City. The research is still on going research. This was conducted by exploration research to 51 Villages in Surakarta and institutional interview survey. Results of the research indicate that there are some constraints related to constraints of planning; constraints of coordination; and constraints of synergy.

Keywords: housing institution, self-help, slum, squatter settlements

1. INTRODUCTION

The Millenium Development Goals (MDGs) adopted by the UN member state in September 2000 are broad goals for the entire world. They address essential dimension of a human right related to poverty reduction; health, gender equality, education and environmental sustainability. The United Nations System assigned UN HABITAT As the United Nations for Human Settlements to play a role in poverty reduction by declaration of “Cities without Slums “. This is targeted that in the year of 2020, has to be achieved a significant improvement the lives of at least 100 million slum dwellers” (UN Habitat, 2003).

These imposed by condition that almost two billion people currently live in urban regions and tend to be double in the next 30 years. By the very great rate of urbanization in the developing counties, most of new urban dwellers are likely to be poor, resulting in the phenomenon of “urbanization of poverty) (UN HABITAT 2003). UN Habitat Global Urban Observatory indicates that in 2003 there are 870 million urban slum populations, which occupied 43 % of urban population. This is a tremendous number of slum dweller in the developing countries.

As one of the member, Indonesia has also contribution for achievement of MDGs. Therefore, Indonesia has declared 7 goals for Indonesia achievement called “Indonesia Millenium Development Goals (MDGs Indonesia)”. The seven MGDs Indonesia are as follow: Reduce of Poverty and Hunger; Achieve Universal Primary Education for all; Promote Gender Equality and Empower woman; Reduce Child Mortality; Improve Maternal Health; Attack HIV/ AIDS and Malaria disease , and Ensure Environmental Sustainability.

The first goal is based on the condition that in 2003 there were 17,4% people live under the poverty line, which is targeted to be 7.5% in the year of 2015 (Bappenas, 2004). This shows that most of urban poor live in slum area in the deteriorated environment. In Indonesia, it shows that in the year of 2000, there were 47.500 ha of Slum Area spreading up in more than 10.000 location spots.

Surakarta has also faced the problem of Slum area, which has to be a great achievement of the major of Surakarta since his election. In 2003, there were about 15 spots of slum areas in Surakarta. In recent year, according to the government the number of slum dwellers is 6,612 Households and squatter settlements is 4.522 units. However, in recent year the condition is getting worse, where the slum and squatter areas could not be seen as a spot but has already spread out all over the city. Sguatter settlements have also occupied almost all of illegal land such as in the riverbank and Right of way (ROW) of the railway. The major of Surakarta has introduced the Policy of “City without Slums in the year of 2010”. Strategies and Targets have been formulated and partnering with supporting institutions such as UN habitat,

Menpera; Department of Public Work has been initiated to overcome the problems of Slum Area. However, there were some constraints in implementation of slum eradication in Surakarta especially related to development of institution in Housing and Human Settlements in Surakarta

2. THEORETICAL BACKGROUND

2.1 Institution Empowerment of Slum Area

In a simple term, slums are low income housing arrangements in the informal sector (pornchokchai, 1993). According UN Habitat, 2003 "*A Slum is a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A Slum is often not recognized and addressed by the public authorities as an integral or equal part of the city"* There are five components considering condition of slums: 1. Insecure residential status; 2. Inadequate access to safe water; 3.Inadequate access to sanitation and other infrastructure; 4. Poor structural quality of housing; 5. Overcrowding

Empowerment is defined as an effort for developing ability, exploring local resources, and widening the role for the community to be the main actor in the development (Astuti, et al, 2006). However, the constraints of empowerment are obviously related to "administrative unempowering/ inability" (Bryant and White in Salim, 2008). It means that lack of empowerment is not only the problem of the poor , but also the problem faced by "Public Sector"' Private Sector and "community". Therefore, an empowerment should be seen in the context of **"Institution empowerment"**, which leads to increasing the role of stakeholder on the housing and human settlements development (Salim, 2008). The constraints in the institutional development will be affecting the effectiveness of the housing and human settlements program especially for the poor.

2.2 Self-help Housing Development

Self-help housing development is defined as housing or human settlements which are built under the initiative of the community. This has contribution for about 90% of housing market in Indonesia (Silas, 2000). The concept of housing is user control rather that self built; Housing by process rather than Housing by product; and sweat equity (Deputy Self-help housing in Astuti, et al, 2006)

3. DISCUSSION

3.1 Characteristics of Slum and Squatter Settlements In Surakarta

In Surakarta indicator of deteriorated housing (RTLH: Rumah Tidak Layak Huni), which is usually located in slum area has already stated in the Official letter of the Major of Surakarta no 13/ 2007 as follows:]Housing size is less than 4 sq m; No adequate access for clean water supply; No access for public/ private toilet; non permanent building material; no enough sunlight and air ventilation; no separate room; wet floor ; deteriorated housing; located in slum area whish is wet; substandard sanitation and drainasi; no proper path; and Location of houses in irregular and very close each other

However, this categorization needs to be reviewed and to be more detailed, because these are only mention about the physical aspects without considering spatial aspect (location of houses): the social and economic aspects such as sector of employment, social characteristic (education, culture; law (secure tenure) and others.

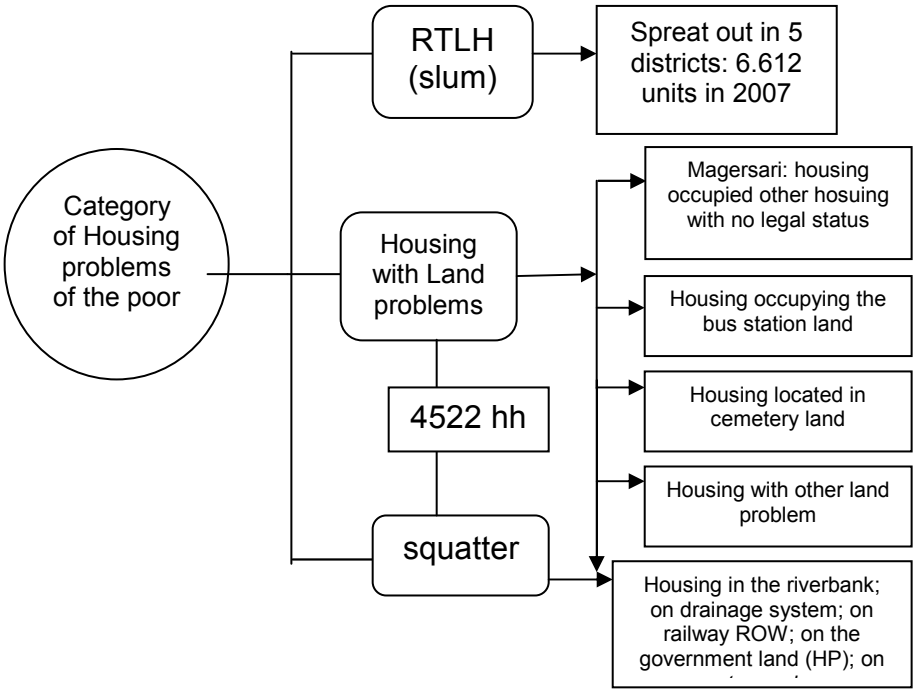


Figure 1. category of Slum and Squatter Settlements in Surakarta
Sources: Field survey, astuti and Ana (2007); DKRPP KB; BPS; Agrarian Office , others

Figure 2. Slum area in Ketelan, which had implemented a program of SUF from UN HABITAT
Source: Astuti, Field survey 2009

Figure 3. Squatter settlements in Kel Pucangsawit, which is located in an hazardous area of Flooding continued to be relocated

Table 1. Features of Slum and Squatter Settlements in Surakarta by 2007

No	Sub District	Size (KM2)	Population (person)	Number of Household (KK)	Number of SlumRTLH	Number of squatter (unit)	Density (JIWA/KM2)
1	LAWEYAN	8.630	109.155	22.864	819	369	12.648
2	SERENGAN	3.190	60.635	15.020	530	271	19.007
3	PASAR KLIWON	4.820	86.708	20.242	2.115	1.363	17.989
4	JEBRES	12.580	139.292	31.870	1.447	823	11.072
5	BANJARSARI	14.810	162.256	37.746	1.701	1.696	10.955
	TOTAL	**44.060**	**558.046**	**127.742**	**6.612**	**4.522**	

Sources: Astuti, field survey ; Surakarta dalam Angka 2005, DKRPP KB, BPN and other sources, 2007

However, this data needs to be checked and clarify, due to over estimate whenever there is a program and all village should propose program for getting financial support. It was found in the research that when SUF program (Slum Upgrading facility- UN Habitat) was entering to Surakarta City, most village in Surakarta sending application and proposal for obtaining support for housing improvement. According To Village Data (*Kelurahan*), which are mentioned in the proposal, this indicates that in Kel Panularan there are 2.503 RTLH (slum houses) ; Kel Penumping is 1072 RTLH; Pajang is 4172. It means that in reality the number of RTLH in Surakarta is more than 6612 units.

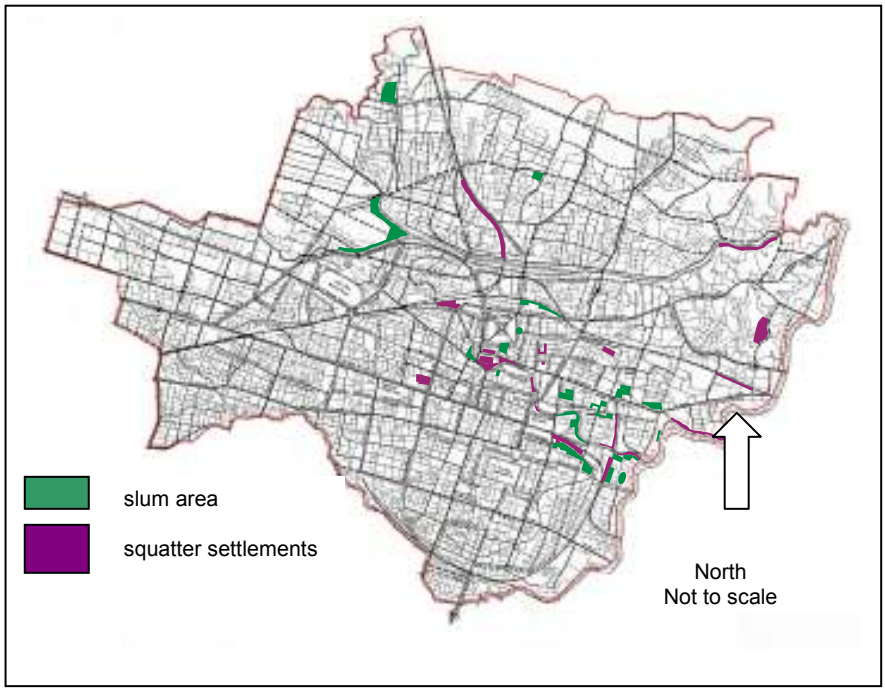
Table 2. Number of RTLH (Slum houses) in Some Kelurahan in Sub district Laweyan, Surakarta City 2007

Name of Village (KELURAHAN)	Number of RTLH	Number of housing getting support
Panularan	2.503	10
Sriwedari	150	
Penumping	1072	30 unit APBD
Bumi	833	10 pemprov
Purwosari	10	10 dr pemprov
Laweyan	-	
Pajang	4.172	10 unit bantuan pemprov
Sondakan	2.395	10
Kerten	1.738	
Jajar	1.704	
Karangasem	1.726	

Sources: Solopos 04 October 2005, Monografi Laweyan District April 2005

The figure below indicates the location of slum ad squatter settlements in Surakarta. This shows that in recently the location is not in spot but it jhas been spreat out in all Surakarta City. Squatter settlements has almost occupied all the riverbank areas in Surakarta and slum areas is located in almot all kelurahan in Srakarta

Figure 5. Location of Slum and Squatter settlements in Surakarta



Sources : Field survey, Astuti (2007)

3.2 Condition of Institution the Self-help Housing Development In Surakarta

3.2.1 Government Institution in housing and Human settlements planning in Surakarta

Figure 3 below depicts the process and mechanism in self-help housing development in Surakarta. Human Settlements planning and development is coordinated in the local level by BAPPEDA of Surakata. This will be delegated to the technical SKPD , such as DKRPP (recently is BApermas PP, PA, KB) for social empowerment; DPU (public Work) for developing infrastructure. This need financial institution form Bank and non bank in the form of “Micro Credit”. Fasilitator is needed in the form of POKJA (KSM).

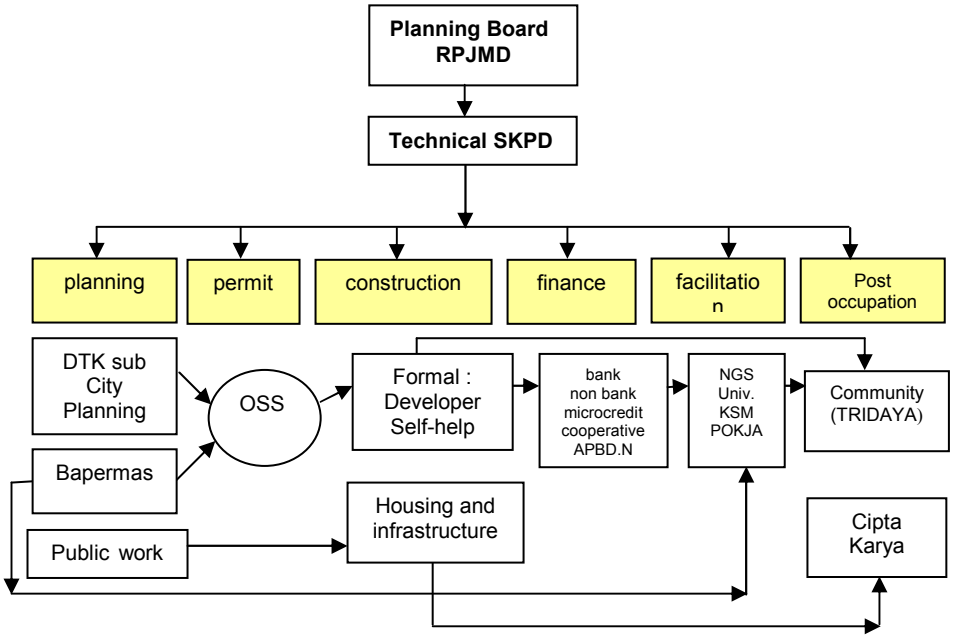


Figure 6. Process and Mechanism for self-help development and and institution involved
Source: Astuti, et all, PIPW LPPM UNS (2006)

3.2.2 Private institution : CSR; bank institution

In terms of involvement of private sector in contributing in housing development in Surakarta, it was found that out of 2029 business company in Soloraya (Soloraya Business Directory 2007) , no one of company utilize their CSR (Corporate Social responsibility) for housing development. However, some business corporates engaged in housing development are as follows (Astuti, 2007):

Table 3. Number of Corporate Engage in Housing and Human Settlements Development

No	Corporate	Number	%
1	Construction management, building and finance	16	0,79
2	Construction	135	6.65
3	Building construction, irrigation and infrastructure	86	4.24
4	Building material	163	8.03
5	Real estate	49	2.41
	Total	**449**	**22.12**

Source: Soloraya Business Directory 2007

3.2.3 Community institution

IN Surakarta, Community institution is empowered in the form of POKJA as community organization which established by the major of Surakarta, which have a role as: firstly, initiator, who develop proposal related to the need of provision or improvement of Housing (RTLH). The proposal is addressed to committee in the Level of Kelurahan. Secondly, conducting consultation; coordination dan reporting the implementation of program periodically to the head of DKRPP and KB (recently named as BApermas PP, PA and KB: Board of Community Empowerment. Woman Empowerment; Child Protection and Family Planning) through the organizing Committee. [1]

3.2.4 Facilitator

Facilitator is a person or institution who support the community in conducting need assessment; preparing planning and development for the community; empowering community in the process of learning and finding the own need and problems. They usually involve in the early process from organizing the community; developing community organization; facilitating in the process of planning, implementation and networking .[2]

[1] *The Major of Surakarta, Perwali no 5A/ 2008*
[2] *Astuti, dkk, PIPW. 2006*

Table 4. Strategic Issues of Settlements Planning through Self-help Housing in Surakarta

No	Institution of Informal Housing (self help)- swadaya	Strategic Issues related to Informal Housing (self help housing)	
1	**Local Government**	**Costraints of Planning**	- Planning and Programming for Informal Housing in Surakarta has not optimally integrated yet. - The local Government has not explixitly state the programming of informal settlement in the Medium terms Development Plan of Surakarta (RPJMD) and in the General Spatial Plan (RTRW; RDTRW), even in the strategic planning of SKPD. There is also no RP4D *(Housing and Settlements Plan)* - Supporting for development of self-help housing (swadaya) has not explixitly stated in the document of local Budgetting (APBD)
		Constraints of Coordination	- There have been no optimum role of Coordination Board specialized for housing and human settlement especially informal housing in Surakarta (BP4D: *badan Pengendalian Pembangunan Perkim daerah*) Moreover, SKPD related to housing and Human settlements development has not established yet. - There is also no local vertical coordination institution with the Ministry of Housing and HS.
		Constraints of Synergy	There have not optimum synergy among tje stakeholder in terms of Housing and Human Settlements Development (government, NGS, private, universty, etc).
3	**Private Sector**	- The role of private sector through the CSR has not maximalized yet especially in terms of housing and human settlements development in general and especially informal housing - Involvement of private sector in the self-help housing development planning and SKPD has not amximum yet.	
4	**Bank and Non-bank housing financial institution**	- Limited alternative scheme for housing fiance especially for informal housing development - Some constraints and procedure for financing informal housing through the involvement of POKJA; Kecamatan; Kelurahan etc, unlesst there is under the project schemes	
5	**Fasilitator and NGS**	There is limitation of involvement of fasilitator in implementation of informal settlement housing scheme.	
7	**Expert**	There is limitation of involvement of expert in planning, monitoring and evaluation and opinion	
	University	There are limitation of involement of university in researches; evaluation, monitoring and fasilitating the community in terms of informal settlement housing program.	
8	**Community**	- Lack of information - Lack of community involement in houisng and hS planning. - Lack of access of the community to the houisng Resources. - Lack of woman empowerment and gender equality in housing and HS development planning	

Sources: Astuti, et al. 2006

3.3 Institutional Constraints

In general there are 3 constraints of Informal Housing and Human Settlements Planning:

1. Constraints of Planning
   This aspect relates to integration of housing and human settlements planning especially informal housing (perumahan swadaya) in the local rolling plan, which is Medium Terms Development Plan (RPJMD) as well as Annual Plan and Spatial Comprehensive Plan, which is not optimum.. This usually indicates in the SKPD program as sanitation program, infrastructure program . This also indicates that Implementation of Informal housing program is not optimally supported bu local finance and Budgeting (APBD).

2. Constraints of Coordination
   This relates to the lack of institution , which has a role in coordinating housing and human settlements development, which usually stated in some departments, boards (BAperams PP, PA, KB, DPU Cipta Karya, BAPPEDA; DTK, etc)

3. Constraints of Synergy
   This relates to lack of empowerment of housing and human settlement resources, especially in the empowerment and synergy among stakeholder in the local planning. Synergy among te government, private sector; community; financial institution; CSR; as well as facilitator and the university.

3.4 Potency for Institutional Development

The key factors for institutional empowerment are as follows: firstly, improving planning in housing and settlement development by developing strategic planning. This also followed by planning self-help housing as a priority in Master Plan and integrated in the Medium Term Development Plan and allocated, which is allocated in the annual APBD (Local Budget). Therefore this involves in the annual roll plan of local planning and budgeting, which stimulate SKPD for participate. Secondly, improving coordination among stakeholder in self-help housing development, government, private and community as well as Local university through TRIDARMA.

4. CONCLUSION AND RECOMMENDATION

As Metropolitan Area, the problem of Slum Area in Surakarta is getting worse. This needs contribution of all stakeholders to take a role in relieving the problems. Empowerment of institution is necessary, from the government; private, community as well as university to take a role in housing development. To overcome the problems of slum area, this should be start since the process of housing planning and programming; implementation ; monitoring until evaluation.

In the planning process, development of General Strategy and Plan for Housing and Human Settlements Development (RP4D) should be formulated. The data and information of housing Condition has to be reliable to avoid misunderstanding situation. This can be reference and mapping for any investment in housing and infrastructure in the city. Integrated Planning and budgeting of Housing and Human Settlements development should be initiated in order to maximize any effort for housing and HS development.

In implementation process, this needs coordination and synergy among the role of stakeholder in charge in housing and human settlements planning. Empowerment of institution from the government institutions; as well as community and facilitator is obvious, in order to maximize all resources to alleviate the problems of urban slum area and finally decreasing the urban poverty

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INVITED PAPER

The Contribution of Participation to Slum Upgrading: Comparing Indian and Indonesian Cases

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ABSTRACT

Extensive decentralization in developing countries has made the role of local urban planning and governance more important, yet challenging. Besides the usual challenges of resources, capacity, and experience faced by newly decentralized local governments, there is also a strong push worldwide to make local governance, planning, and development processes more participatory and empowering. It is within such contexts that this paper conducts a comparative analysis of two acclaimed participatory slum upgrading (PSU) programs in India and Indonesia. It investigates how participation in post-decentralization PSU programs impacts physical upgrading and community development outcomes, as well as the empowerment of the poor. The role of NGOs and microfinance for community development in PSU is closely addressed. I apply mixed methods in a comparative approach, and use a theoretical framework that accounts for the effects of macro-level opportunity structures, aspects of program design, local contextual factors, and institutional arrangements on upgrading and empowerment outcomes. Overall, I found that participation does create a sense of empowerment among participants, but it does not significantly affect physical upgrading. Empowerment also appears to be influenced by a household's socio-economic status, but not by the quality of physical upgrading.

Keywords: empowerment, India, Indonesia, participation, slum upgrading

1. INTRODUCTION

Since the 1980s, in-situ slum upgrading (SU) has become an effective tool for urban poverty alleviation. For over a decade now participation and decentralization have altered the nature of urban planning and policymaking in the developing world. Such transformation is expected to enhance local government autonomy and multi-sectoral (public, nonprofit, and private) partnerships toward expedient and equitable service provision for alleviating poverty. Reflecting these changes, the term SU these days mostly implies participatory slum upgrading (PSU). Moreover, in seeking physical, socio-economic, and legal improvements, PSU today is much more comprehensive than earlier slum improvement policies, such as slum resettlement and sites-and-services, which were mostly for physical amelioration. The empowerment of the urban poor is often a central objective of today's multi-pronged upgrading. This paper, discusses upgrading and empowerment outcomes in two acclaimed post-decentralization comprehensive PSU programs – the Comprehensive Kampung Improvement Project (CKIP) in Surabaya, Indonesia; and the Slum Networking Project (SNP) in Ahmedabad, India. The comparison illuminates the how PSU outcomes vary because local conditions and institutional forms/linkages affect and are affected by decentralization and participation.

Organized into four main sections, the paper's first section provides the introduction and a brief discussion of the relevant literature and conceptual framework. The short second section presents the research questions, research design and methods. The third section is the main analytical section. Following a terse explication of the contexts and backgrounds, the discussion centers on selected merits and shortcomings, and their underlying reasons, in the two programs. Besides physical upgrading, the analysis concentrates on certain key objectives and components of socio-economic development – micro-finance, community participation and the role of women, contribution by non-governmental organizations (NGOs), and the participation-empowerment relationship. The nuanced, empirically evidenced discussion of empowerment in PSU is a modest yet unique contribution to the literature on participatory urban planning and development. The conclusion constitutes paper.

2. BRIEF REVIEW OF THE LITERATURE

The conceptual framework of this research emerges from the interlinked concepts and current debates in three substantive areas of the international development literature – a) slum upgrading; b) decentralization and good governance; and c) community participation and empowerment. Today SU tends to be a comprehensive undertaking addressing physical, environmental, legal, economic, and human development. Current SU

wisdom demands a less interfering but more enabling role of the state to foster participation and innovative and sustainable solutions through public-private partnerships (PPPs), flexible forms of security of tenure, and micro-finance (Imparato and Ruster 2003; Miraftab 2004; Payne 2002; UN-Habitat 2003). Tenure security and property rights are considered among the core empowering dimensions of SU (de Soto 1989; Payne 1997). Participation by slum dwellers can be incorporated in SU some or all of the following project stages: a) identification; b) planning and design; c) financing; d) project implementation; e) monitoring and evaluation; and f) maintenance (compiled from Plummer 2000, and Imparato and Ruster 2003).

The decentralization of planning and policymaking to local government and efforts at participatory development and governance strive for efficient, appropriate, and equitable development outcomes– ends that top-down centralized planning in developing countries failed to attain. Decentralization is supposed to help these ends by transferring authority, responsibility, resources, and accountability from central governments to intermediate and local levels of government, as well as to NGOs and private sector entities (Barnett et al 1997; Litvack et al 1998; Rondinelli and Nellis 1986, 5). The idea of good governance for greater autonomy, accountability, and transparency emphasizes productive synergies between the state, civil society, and the private sector, and between the government and the governed (McCarney, Halfani, and Rodriguez 1995). Good governance makes governance and decision-making more inclusionary by allowing non-state actors – NGOs, other civil society organizations (CSOs), and community-based organizations (CBOs) – to leverage the extensive [informal] webs of urban civil society in local planning and development activities (2003, 38).

The decentralized provision of urban basic services is believed to be more efficient – by better allocating scarce resources to local preferences and increasing productivity, trimming bureaucatic structures and transaction costs (Kahkonen and Lanyi 2001), and including non-state actors and communities themselves in the provision and management of urban services (Devas 2001; McCarney and Stren 2003).[3] The NGO sector's roles in urban development and its effectiveness vary depending upon national regulatory and local political contexts (Fisher 1998). On the whole NGO efforts have increased women's participation and made the development discourse gender-sensitive (see, for instance, Fernando 1997; Moser 1989; O'Reilly 2004).While NGOs are commonplace in advocacy and socio-economic development (health and education, for instance) activities, their contribution to housing and infrastructure services is rarer and considered more difficult (Mukhija 2003; Sen 1992). NGOs do support housing and infrastructure

[3] Their motivation, generally small-scale operations, adaptability, innovation, deep knowledge of the local, and access to the poor and the ability to mobilize their participation make NGOs effective development agents (Streeten 1997).

development indirectly though, by helping the poor build savings and collateral by providing them access to microcredit (Ferguson 1999; Smets 1999, 2000, 2006).

Overall, with spread of decentralization and good governance initiatives, and the substantial growth of democracy and civil society worldwide, participation by citizens, communities, and CBOs has become an essential aspect of pro-poor development. Some scholars criticize this uniform imposition of participation as its reduction to a mere problem-solving tool, thereby compromising its potential for critical engagement toward the key objective of empowerment (Cleaver 2001, 53; Cooke and Kothari 2001). Participation can be dichotomized into means and ends (Cleaver 1999; Moser 1983; Nelson and Wright 1995), depending on whether we are concerned with efficiency goals (better project outcomes) or those of equity and empowerment (enhancing people's capacity for self-determination and social change). Although a complex construct, empowerment, simply speaking, refers to an individual's or group's capacity to make choices, exercise them, and realize improved outcomes (Alsop and Heinsohn 2005, 5).

Decentralization is usually the first big step toward improved local governance. However, decentralization-driven ends may not be compatible with participation-led processes. This is because decentralization and participation are fundamentally distinct. The economics-driven logic of decentralization mainly aims for efficiency in service delivery; but the equity- and empowerment-oriented emphases of participation are slow and fraught with uncertainty (Imparato and Ruster 2003; Mansuri and Rao 2004). Imparato and Ruster (2003) found that community motivations and capacities vary greatly in PSU, and more participation does not always lead to better outcomes, nor is it always desirable

3. CONCEPTUAL FRAMEWORK

Figure 1 diagrammatically represents the conceptual framework of the research from which this paper is drawn. Empowerment and upgrading outcomes have been conceptualized as two distinct project outcomes. I propose that for a PSU project, which explicitly states empowerment as a primary objective, this distinction is essential for gauging success. I borrow from frameworks suggested by Alsop and Heinsohn (2005) and Narayan (2005), which posit that agency and opportunity structure influence empowerment, and each other. But I modify, and simplify, my framework to closely address empowerment through a household's participation in local government initiated PSU projects in post-decentralization contexts.

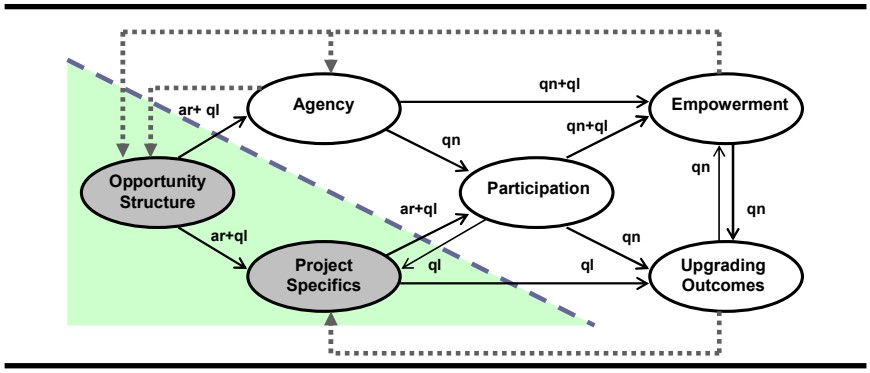

Figure 1. The conceptual framework

Empowerment of the poor depends on (Narayan 2002): i) access to information; ii) inclusion and participation; iii) accountability (political, administrative, and public); and local organizational capacity. These basic elements are universal. However, empowerment due to specific development interventions or public action *in a particular context* also depends upon: i) nature of public action; ii) extant patterns of exclusion and conflict; iii) decentralization impacts; iii) robustness of local public and civil society institutions; and iv) political freedom. The Alsop and Heinsohn (2005) framework classifies these context-neutral and context-dependent factors into two broad categories – 'agency', and 'opportunity structure'. This taxonomy distinguishes between what an 'individual' can do and what 'her environment' does, as well as emphasizes a scalar dimension – *micro* versus *macro*. The framework further suggests that empowerment can be felt and assessed at different *domains* of a person's/community's life (state, market, and society) and at different *levels* (local, intermediate, and macro).

I insert 'participation' (type/quality) as another central component in this conceptual framework.[4] Earlier frameworks have not treated 'participation' *per se* as a variable that impacts empowerment, and instead consider it only for predicting material outcomes (Isham, Narayan, and Pritchett 1995; Narayan 1995; Isham and Kähkönen 1995, 2002; Prokopy 2005). For a more holistic overview and wider communicability, and space constraints, this paper discusses qualitative and archival evidence more than quantitative ones. One must remember that depending on project specifics, process, and agency characteristics, empowerment and upgrading outcomes could mutually influence each other too.

[4] *In terms of Alsop's and Heinsohn's analytical structure (2005), I locate empowerment in the domain of the state, within the sub-domain of service delivery, using settlement and city as the spatial units at the local and intermediate levels, respectively.*

4. RESEARCH QUESTIONS

This research seeks answers to the following questions:

- How does decentralization affect institutional arrangements for local urban planning and development initiatives such as PSU?
- How do local conditions – institutional, political, historical, cultural, and temporal – affect the quality of participation in PSU?
- How does participation in PSU affect upgrading outcomes and empowerment?

5. RESEARCH DESIGN AND METHODS

This paper is extracted from a larger research project (see Das 2008). The research design involved a comparative study of the SNP and the CKIP. Four individual projects were studied in each city – two in which stakeholders deem participation successful; and two where they saw participation to be weak. The research employed a mixed methods approach (archival, qualitative, and quantitative), which also allowed data triangulation. The archival research investigated brochures, journals, and newspaper/magazine articles. The qualitative tools included content analysis, 35 semi-structured key informant (stakeholders) interviews, and on-site observations. Data collected through a household survey (N=400; 200 in each city) were used for the quantitative analysis involving descriptive statistics, OLS regression, and two-stage least squares regression using instrumental variables to test the impact of participation on upgrading and empowerment outcomes. Given space constraints and the general structure of the paper, I will limit the details of the quantitative analysis to some descriptive statistics.

6. PROGRAM BACKGROUNDS AND CONTEXTS: SIMILARITIES AND DIFFERENCES

The SNP in Ahmedabad and the CKIP in Surabaya are post-decentralization programs in India and Indonesia, respectively. They deploy similar concepts, objectives, and approaches. Both cities have populations between 2.5 to 3 million. Locally developed and funded, these programs seek comprehensive development for the urban poor (Table 1 lists the program components). Besides physical improvements, community economic development through microfinance, and skills and employment generation are key objective of both programs. Because it targets slums without any services or legal status, the SNP's original goals were more expansive and included socio-economic development objectives such as childcare, adult education, and primary healthcare services. By contrast, the target populations in Surabaya are the

poor among the residents of the city's numerous *kampung*[5] – mixed-income, traditional neighborhoods in which few homes lack legal status. Since the early 1970s, Surabaya's *kampung* had already received most basic amenities through upgrading efforts.

Community participation in the projects is the guiding principle in both programs. Empowerment of the urban poor by developing communities' capacity to organize themselves, manage projects during implementation, and sustain the interventions afterwards are viewed as essential for program success. This is attempted through the formation of CBOs in the communities. The number of CBOs, their tasks, and their composition differ in the two programs.[6] While the SNP interventions are fixed, a CKIP community, through its CBOs, chooses the services and funding there of. Household contribution (one-third of the project cost) is mandated in the SNP but is voluntary in the CKIP. Likewise, the issue of tenure are also treated differently. The SNP offers a ten-year guarantee of non-eviction to upgraded slums but not land titles because granting titles involves state-level legal reforms and the project is viewed as helping families toward moving out of these locations eventually. Initially the CKIP meant to provide building permits and ownership certificates to poor households who did not possess them, but it was discontinued because of its complicated and time-intensive nature.

Table 1 Project interventions in the SNP and CKIP

Physical Development	Community Development
1. Roads and footpaths (CKIP & SNP)	12. Skills/employment generation (CKIP & SNP)
2. Household water connections (CKIP & SNP)	13. Micro-finance (CKIP & SNP)
3. Community sewerage network (SNP)	14. Micro-insurance (SNP)
4. Storm water drainage (CKIP & SNP)	15. Primary health services (SNP)
5. Toilets: public (CKIP), individual (SNP)	16. Pre-school education and crèches (SNP)
6. Street lighting within the slums (SNP)	17. Adult literacy (SNP)
7. Landscaping (CKIP & SNP)	18. Awareness creation about program (CKIP)*
8. Solid waste collection (CKIP & SNP)	19. CBO training and management (CKIP & SNP)*
9. Housing repair loans (CKIP)	
10. Land certificates and building permits (CKIP)	
11. Preparing kampung site plans (CKIP)	

*A formal objective in the CKIP; although not a formal objective in the SNP, the main NGOs do this extensively on their own.

Source: CEPT School of Planning (2004), DTKD and CSW (1998), DTKD and LPP (2004), and LPP (2004).

[5] *Illegal squatter settlements and rural settlements are also referred to as kampung in Indonesia, but these are not addressed by the CKIP.*

[6] *Under the SNP a single CBO of up to 12 executive members, mostly women, is formed in each slum community. In Surabaya, 3 different types of CBOs are formed in each CKIP community. A Yayasan Kampung (YK or the Kampung Foundation – the main CBO) and a Koperasi Serba Usaha (KSU or Business Cooperative – for managing the microcredit component) are formed in each community along with multiple Kelompok Swadaya Warga (KSW or Self-help Group).*

6.1 SNP

The SNP in Ahmedabad was the third city in India to implement slum networking[7], and the first supported solely by locally-generated funds. The SNP pilot project in 1996 Ahmedabad was an ambitious public-private-NGO partnership. The costs for physical upgrading were equally distributed among the AMC, the private sector actor (Arvind Mills, a large textiles producer), and the slum community (Chauhan and Lal 1999, Tripathi 1998, 1999). Physical upgrading was the sole responsibility of the AMC, while community development was handed to the NGOs. Community development funds were mainly provided by the AMC and Arvind Mills. Although exceptional in its cost recovery effort, the partnership crumbled immediately after the pilot because of differences between the public and private sector partners (Tripathi 1999).

The main NGOs from the pilot, SAATH (whose original focus expertise was health and education) and SEWA Bank (the micro-banking institution of SEWA – a powerful cooperative of poor women) have continued to work on SNP projects. After the pilot project, the SEWA Mahila Housing Trust (MHT) joined the SNPand is today the most prolific NGO in SNP projects. Through mutual dialogue and negotiations, the local government and theNGOs brought about two significant changes in the SNP's institutional arrangement for enhancing implementation efficiency. First, after the pilot it was decided that each project would have a single NGO for community development to minimize confusion and friction. Second, with the pace of implementation remaining slow, upon prodding by MHT and SAATH the AMC in 2004 agreed to let NGOs manage the physical works in addition to the community development aspects in SNP projects. The AMC would be restrict itself to being the main funder and overseer. Stricter, clearer MoUs were scripted to ensure timeliness and accountability by the NGOs.

These unconventional institutional innovations of the SNP were made feasible by Ahmedabad's contextual uniqueness – one that facilitates understanding, trust, and common purpose between the local state and civil society. As the city from where Mahatma Gandhi led India's freedom struggle, Ahmedabad has long had a socially responsive corporate sector and a strong NGO sector (Spodek 2002). Also, during 1994-97, under exemplary leadership the AMC underwent a tremendous administrative reorganizing and financial reform, coterminus with larger decentralization reforms, (Tripathi 1999).

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[7] *Slum networking was a concept developed by an engineer named Himanshu Parikh. It was first implemented in the city of Indore in 1990. Inexpensive materials, creative construction technologies, and alternative construction standards were used for upgrading, with the idea that services would be provided to slums on a citywide scale thereby networking them with the city's existing infrastructure.*

6.2 CKIP

The CKIP in Surabaya similarly benefits from a uniquely favorable context. Surabaya, alongwith Jakarta, pioneered the internationally renowned, nationally executed upgrading program called the Kampung Improvement Program (KIP). Surabaya's KIPs since the late 1960 have been realized with synergistic collaboration among the local government, the city planning department (*Dinas Tata Kota Daerah*, DTKD), and the Laboratory for Housing and Human Settlements (LPP) housed at ITS, a premier technical university. Indonesian planners commonly acknowledge Surabaya's tradition of having an unusually responsive local government and its egalitarian society. The CKIP is a joint effort between the DTKD and the LPP. With World Bank financing for the KIP scheduled to terminate in the late 1990s, Surabaya decided to continue pro-poor development efforts through the CKIP – a program wished as one more effective, equitable, and empowering than its predecessors (Swanendri 2002). The CKIP was first implemented during 1998-99, just as Indonesia emerged from over 30 years of President Suharto's autocratic rule. Indonesia quickly became the most extensively decentralized country in the world. Suharto's heavily centralized rule had bred a pervasive culture of poor governance, corruption, and incompetence in local government (Booth 2003; Hidayat and Antlöv 2004), and his New Order regime had prevented the emergence of a vibrant and puissant NGO sector (Eldridge 1995).

The CKIP sought to capitalize on the new opportunities thrown by decentralization. By transfering decision-making and management responsibilities to new CBOs, it sought to liberate local communities from the vestiges of Indonesia'shistorically suffocating administrative structure. An active role for NGOs as facilitators was also envisaged. Besides local government revenues entirely funding it, another landmark change in the CKIP was its much greater emphasis on community economic development, as opposed to physical upgrading, through community managed micro-credit (the *dana bergulir* or revolving fund). Like the SNP, the CKIP too stumbled after the first year because of funding issues. It has been steadily implemented since 2001, although funding has gradually waned. Unlike the SNP, in which one project geographically implies one slum settlement, a CKIP project is implemented at the sub-district level (*kelurahan*, which comprises of many *kampung*) and not at the settlement level (*kampung*). In a given calendar year all CKIP projects receive the same amount of funds and are implemented within the same timeframe, irrespective of *kelurahan* peculiarities. The NGO's role is to mobilize communities to help form CBOs, and then act as an advisor and facilitator to the community. The post-decentralization quest for transparency and accountability is guided by a detailed project MoU that sets down tasks and strict deadlines for CBOs and NGOs.

7. PHYSICAL UPGRADING

Physical upgrading in both programs has been efficient and of high quality. This is not only visible to an external observer but is also evident from the high degree of satisfcation expressed in the household survey responses (see Table 2 below). In both programs households ranked most physical development outcomes from 'satisfactory' to 'excellent'. Generally, SNP households ranked the outcomes better than their CKIP counterparts. This is likely because the slums in Ahmedabd were receiving basic services for the first time ever, as opposed to the CKIP communities where most services existed and the current interventions were mostly improvements or expansions.

Table 2 Quality of upgrading responses

Upgrading component	SNP, Ahmedabad (% of total sample, N=199)				Actual	CKIP, Surabaya (% of total sample, N=198)				Actual
	Bad	**Satisfactory**	**Good**	**Excellent**	responses	**Bad**	**Satisfactory**	**Good**	**Excellent**	responses
1 Improving roads and pathways	2.0	4.5	28.1	**65.3**	199	2.5	33.3	**46.0**	1.0	164
2 Water supply	3.5	4.0	23.1	**69.3**	199	2.0	2.5	**31.3**	_	71
3 Sewerage	0.5	5.5	39.2	**54.8**	199	4.5	**29.3**	20.2	_	107
4 Storm water drainage	2.0	4.0	**42.7**	_	97	12.6	**26.8**	24.7	_	127
5 Latrines and toilets	1.0	3.0	35.2	**60.8**	199	1.5	**23.2**	19.7	_	88
6 Street-lighting	**32.7**	22.6	**27.6**	16.6	198	3.5	20.2	**22.2**	_	91
7 Landscaping and greening	44.2	29.1	12.6	6.0	183	6.6	**19.7**	**19.7**	_	91
8 Garbage collection/solid waste management	4.0	8.0	**44.7**	41.7	196	7.6	**26.8**	22.2	_	112
9 Skills and employment generation	22.6	**40.2**	19.6	10.6	185	2.0	**11.6**	10.1	_	47
10 Microfinance/microcredit	24.6	**35.7**	17.6	13.1	181	3.0	23.2	**33.3**	_	118
11 Primary healthcare services	16.1	32.2	**36.7**	9.5	188	0.5	**21.2**	17.2		77
12 Educational services	19.6	**32.2**	29.6	12.1	186	0.5	**12.1**	9.6	_	44
13 Housing (private dwellings) improvement						0.5	**22.7**	12.6	_	71
14 Organizational/management skills for running CBOs						_	4.5	4.0	_	17
15 Business skills for small and medium enterprises						0.5	4.5	9.1	_	28
16 Micro-insurance	22.1	**34.2**	14.1	5.5	151					

The figures in boldface show the most responses in each category
Source: Author

The positive aspects of the 'project specifics'of both programs mainly contribute to good physical upgrading. In the SNP, the positive project specifics include careful design and consistent execution, the AMC's fiscal reforms which have greatly boosted its revenues (about US$222,000 are annually earmarked for the SNP), changes in the AMC's organizational culture and work ethics, and the continued capacity-expansion by the two main NGOs to effectively deliver physical services.

Despite the SNP's standardized bundle of services, repeatedly providing that bundle for over a decade (like the older KIP in Indonesia) has instituted efficiency – projects mostly stay within budgets and timeframes. This has been more pronounced since NGOs became singly responsible for both physical and community development aspects of the projects. That said, I feel this latest institutional rearrangement will also restrict the program's potential for scaling-up. First, the projects have become quite challenging for

the NGOs since their responsibilities were expanded to include physical services. Second, few NGOs are willing to or have the capacity to participate in projects where they have to master delivering physical services. Indeed, most NGOs are unlikely to expand in size and capacity as MHT and SAATH. Because of the scarcity of NGO partners and an arrangement that requires an NGO at the helm, today barely half of the SNP's available annual funds gets spent.

Practice makes perfect. This adage rings true in Surabaya. Almost three decades of undertaking KIP has prepared both the local government and the local communities very well in terms of how physical upgrading is done. The quality of works is consistently good and physical upgrading is routinely accomplished within the alloted period of about six months. Physical upgrading in the CKIP has generally comprised the paving of pathways, construction and repair of storm drains, and new public toilets. CKIP design templates and construction details were first created by the LPP's superior architectural talent, and these have been continually revised and honed over the years. Moreover, physical upgrading in the CKIP now mostly involves improvements, which is simpler than providing all infrastructure anew. But CKIP's paltry purse pales in comparison to older KIP projects, or other similar externally funded projects that are currently underway. In recent years, each project (*kelurahan*), which comprises multiple large neighborhoods, has received just over US$10,000 and never has that figure exceeded US$27,000 (see Table 3). Surabaya has 163 kelurahan (with over 90 remaining) and a population of over 2.8 million. Without increasing its budget the CKIP cannot become the city's leading upgrading strategy. Thus, despite its high degree of community autonomy for choosing services and its progressive participatory approach, CBO officials explained that the CKIP's small budget makes it less appealing to community members . Since *kelurahan* often have multiple upgrading/poverty alleviation programs running simultaneously, people tend to gravitate more toward better-funded programs.

Table 3. Annual funding for CKIP

Year	Total *kelurahan*	Amount per *kelurahan* (in million Indonesian Rp)	Amount per *kelurahan* (in US $)	Total budget (in million Indonesian Rp)	Total budget (in US $)	Distribution among *kelurahan*
1998-99	15	198.616(avg)	19,861.67	2,979.250	297,925.00	Variable
2001	4	200.00	20,000.00	800.00	80,000.00	Equal
2002	6	250.00	25,000.00	1,500.00	150,000.00	Equal
2003	8	250.00	25,000.00	2,000.00	200,000.00	Equal
2004	12	275.00	27,500.00	3,300.00	330,000.00	Equal
2005	9	111.00	11,100.00	999.00	99,900.00	Equal
2006	9	104.00	10, 400.00	936.00	93,600.00	Equal
2007*	9					

Note: Approximately 10,000 Indonesian Rp (Rupiah) = 1 US $
* Funding information not yet available
Source: Compiled by author from project reports

8. COMMUNITY DEVELOPMENT

Community development has many dimensions, which are explicitly articulated as distinct socio-economic development objectives in both programs. Although certain aspects of community development have fared well in each program, overall physical upgrading has outperformed community development. This is partly due to stakeholders' greater experience with physical upgrading, but also because community development is complicated and difficult within limited timeframes. Also, oppressive aspects of the opportunity structure or project specifics can predispose community development to unfavorable outcomes. Instead of dissecting every component or determinant of community development, I will focus on how NGOs and microfinance have affected community development.

Despite catering to a population with significantly weaker human development indicators (Das 2008, 350-51), overall, the SNP has performed better than the CKIP in terms of community development. This is primarily because of the difference in the expertise and experience of SNP's partner NGOs in the areas of community health, education, women's rights, and microcredit. Table 2 shows that in both programs households tended to rate physical upgrading outcomes higher than the comunity development outcomes. However, in terms of these self-reporting data, the evidence is not that conclusive because of the contextual differences (which stresses the need for mixed methods). For instance, the best-performing aspect of community development in the SNP is microcredit (although it is not rated very high by the survey respondents). The SNP rules require that a third of the total cost of providing physical services be met by household contributions. This translates to Rs.2000 (approximately USD 50 at the time of the research) per household. A project starts only after about 80 percent of all households in a community contribute their share. NGOs perform this arduous task of educating and convincing the households and acquiring their contributions. Many households do not have Rs. 2000 handy. So the project NGO first starts by getting all households to open accounts and then to save regularly with its community-managed cooperative bank. Micro-loans help needy households make their project contributions. Thus, the money from new household accounts forms the seed fund for microcredit in a slum community.

Each account holder is in female household member's name – a deliberate step to empower women. The NGOs and residents proudly state that the number of accounts steadily rises, as do households' savings. Most households maintain savings accounts in these micro-banks. The SEWA Bank is one of the world's renowned microfinance organizations with over thirty-five years of experience. SAATH's involvement in the pilot helped it learn about microfinance and start its own micro-bank (the SSCCB) to serve slum households. Today even the SSCCB regularly receives USD 2500-7500

per month; its portfolio of active loans is worth over USD 50,000; and one can borrow up to USD 750 at a time. Also, the extensive networks that these NGOs have in the slum communities of Ahmedabad allow them the services of an army of women that regularly goes door-to-door to educate other slum residents about micro-banking and regular savings (SAATH insists on USD 0.50 a month; in a few years women save up to USD 10-12 monthly). This process of awareness creation is tedious. A government agency cannot perform such tasks with comparable efficacy or desire. Lastly, SNP NGOs insist upon having as many women, if not all, as executive members in the CBOs as possible. The majority of SNP slums have all women CBOs. The NGOs'sustained efforts have attained a threshold level of awareness in the slums, and gaining women's participation is much easier now than before. This extensive network of women volunteers and employees also enables SEWA Bank and SSCCB to achieve high repayment rates.

SEWA Bank and SAATH were working with Ahmedabad's slum populations long before the SNP's inception. Their access into Ahmedabad's slums enabled the SNP's swift acceptance by the communities. Although MHT was created after the SNP pilot project, benefiting from being a part of the SEWA organization (which has been around since 1972 and has a statewide presence) it grew rapidly into an efficient NGO specializing in housing-related activities. I argue that NGOs have contributed positively to community development in the SNP due to the larger opportunity structure at the national and local levels, which has largely allowed NGOs the freedom to exist, innovate, and thrive.

The shortcomings related to NGO roles in the SNP are the result of project-specific features, primarily the institutional arrangement and its iterations. Program regulations now require a single NGO to manage all community development components as well as physical upgrading. This naturally discourages smaller NGOs from stepping forward – only two NGOs other than MHT and SAATH have agreed to join the SNP. One of them, World Vision (in Ahmedabad), had only one person handling all community development activities in three projects. It found itself wanting in meeting the community development targets and was contemplating to not steward any more projects. Also, since each NGO has specific interests and expertises, community development outcomes vary across projects. Generally, SAATH achieves better outcomes with education and health than MHT. Since 2004, when NGOs were also delegated physical upgrading, even a large NGO like MHT is having to devote more time and resources to physical upgrading. The current MoU, which sets clear physical upgrading targets but not for community development, also encourages less attention to the latter in the SNP.

Community development has generally been less impressive in the CKIP. This is partly explained by an opportunity structure quite opposite to the SNP's. Elements of the larger opportunity structure and project specifics,

reflective of the state's historical suppression of the NGO sector, hamper community development in the CKIP. No true NGO has participated in the CKIP despite the program's concept and literature claiming NGO participation as a central tenet. Unclear and fuzzy definitions and regulations governing NGOs in Indonesia can practically allow any non-state entity to be deemed an NGO. In the early years of its program the LPP (the local university research center that created the concept) played the NGO facilitator's role. In recent years two private consulting firms, with near zero experience in community development, have played this role. Real NGOs and other possible CSOs have been excluded because the city's planning department (DTKD) and the LPP feel that they will not improve CKIP outcomes in any way. Interestingly, some local NGO activists feel that the CKIP design is inherently less participatory, despite its claims, because the process did not include local CSOs. There are some other impediments too. A sweeping national regulation for achieving greater accountability in development activities involving 'procurement', the Presidential Decree No.80 (*Keppres 80*), passed after the CKIP started, allows only one facilitator annually. A competitive bidding process is mandated for selecting the facilitator, which considers current financial capacity and previous project sizes as primary evaluation criteria in selcting the facilitator. These make it very hard for historically marginalized NGOs to outbid private sector actors or contribute toward expanding socio-economic development in the CKIP.

The revolving fund, CKIP's microfinance instrument, tends to be poorly managed in many *kelurahan* owing to certain inherent shortcomings in CKIP project specifics. The contact phase for microcredit training between CBO members and their trainers is simply too short and cursory. Every CKIP project is implemented in six months. Invited officials from the public banks or financial cooperatives coach CBOs and interested community members on how to run the microfinance system, in just two to three few-hour long sessions. It might be recalled that in Ahmedabad not only were NGOs involved with the communities much before the SNP but they also had solid microfinance experience. No CKIP facilitator had prior experience in dealing with microcredit. The private sector facilitators in later years hired temporary workers with NGO experience to manage community development. But local NGOs and CSOs, especially a large regional women's cooperative, are actively involved with microcredit but not in the CKIP. More importantly, the community-managed revolving fund can fail because the CBOs and the borrowers have little incentive to desire its growth – the fund is essentially a gift from the government with zero user contribution. The local government provides the money for the revolving fund (which has ranged from USD 11,100-27,500) constitutes 70% of the total CKIP budget for each project. Without adequate resources for educating borrowers on financial discipline and savings, or for collecting repayments regularly, default rates are high (up to 80 percent in one settlement I studied).

It could be argued that microfinance is a tool for individual/household economic development rather than community development. Structured and institutionalized microfinance with financial institutions such as large banks definitely support individual economic growth. But in communities where most or all residents are poor, small-scale community-managed microcredit programs have the potential to affect collective well-being through economic incentives to individuals and households. It is not just access to the loan that carries development potential. Community-wide financial education, and organizational and management skills gained through community-managed microcredit systems lead to broader community development. The role of NGOs as catalyst is critical in these processes, as evidenced by the SNP. Similarly, mechanisms in the CKIP that restrict lending to self-help groups (to utilize the benefits of peer-pressure), but not individuals, also help to spread development potential from the individual/household to a larger collective.

The design of CKIP's participatory mechanisms failed to account for some limiting factors of the opportunity structure related to cultural traditions and societal customs. Poor women's participation in civic activities and community decisionmaking is rare in Indonesia, yet the CKIP has no specific provision to to boost participation by women. Johan Silas, the LPP director at the time, also acknowledged that participation by women in the CKIP CBOs has been negligible. In general, participation by the poorest memebrs of these communities has been feeble. In Indonesia's hierarchical society, people of lower socio-economic status tend to not question, let alone oppose those of higher status. The poor rarely voice opinions or assert demands in CKIP community meetings. Thus, the fate of community development outcomes is steered by the decisions and intentions of community elites.

9. PARTICIPATION AND EMPOWERMENT

The SNP and the CKIP are participatory development projects designed in a top-down fashion by their respective local governments. Some might consider this to be a major flaw in approaching participation. Practically speaking though, to expect a powerful bottom-up participatory model for service-delivery projects involving extremely destitute, marginalized, and disenfranchised populations is unrealistic and ambitious. Yet, if stronger and meaningful participation is more empowering, then in these programs there remains much to expand and improve in terms of participation for real empowerment. At least this is what I felt as an academically trained observer informed by theoretical discourses on participation and empowerment. Participation could indeed be enhanced in the processes of the two programs. For instance, the SNP does not allow community members to participate in the planning and design stages, which are supposed to have the highest empowering potential (Plummer 2000). The CKIP allows complete freedom to communities on how to participate, choose, and act, but

the sophisticated tasks and responsibilities of CBO office-bearers preclude those without a high school level education from serving. Also, unlike the SNP, the CKIP does not target efforts to increase women's participation. Moreover, these programs do not provide tenure (SNP) or assistance with tenure documents (CKIP), meaning that the hugely empowering potential of citizenship through tenure documents remains unmet. Since NGO contribution to community development is nonexistent in the CKIP and declining in the SNP, the potential for human development (through education, awareness of health issues, and skills development), an essential dimension of empowerment, is not being adequately leveraged.

The experience of NGOs in Ahmedabad led them to insist that most community development activities be done by women – from managing CBOs and running the microcredit operations to opening bank accounts. This formalization of an informal principle (not mandated in the official MoU) has created a large space for women's participation despite the relatively narrow space for participation provided by the program's design. Not only is this a clear and effective startegy to empower women, but I would argue that the marked improvements reported in socio-economic development indicators such as improved household finances, lower instances of illness, and growing enrollment of children in schools (SEWA Academy 2002) has been achieved by intensive involvement of poor women at a citywide scale.

The link between participation and empowerment has been discussed in detail through quantitative analysis elsewhere (Das 2008), and I will present some key findings here. An interesting finding is that quantitatively analyzing people's self-reporting of empowerment through a survey could be different from the external researcher's observations and qualitative findings. For instance, I felt that the spaces for and/or processes of participation were constrained in both the SNP and the CKIP, but households in both contexts conveyed a strong sense of empowerment from their limited participation. I posit a plausible explanation for this in the next paragraph. Descriptive statistics revealed that participation in similar projects in different contexts could make one feel empowered through one or more of its many dimensions (see Table 4). An empowerment index was created for use in the quantitative models (not discussed here), and Table 4 shows how its various dimensions contributed toward the overall sense of empowerment.[8] Different opportunity structures, project specifics, and agency qualities affect these variations. People in the SNP slums felt more politically empowered with indicators of individual and community power, political awareness, and

[8] *The constituent variables of this index variable are shown in Table 4. Since empowerment is a multi-dimensional concept and construct, its constituent variables represent various aspects of empowerment – psychological (happiness, control over life, and confidence in one's ability to influence others); political; legal; assets-wise; economic, employment-related; land value and rents; human development indicators such as health and educational status; access to wider civil society networks (NGOs and other CSOs); access to state institutions; communication and connectivity; and social capital (relations with community members and other communities).*

access to CSOs and NGOs registering the most positive responses. On the other hand, those in the CKIP *kampung* felt more economically empowered as indicated by the relatively high percentage of positive responses to factors such as household income and access to credit.

Overall, the quantitative analysis indicates that participation in PSU projects does induce a sense of empowerment. I as well as the respondents of both programs felt that the quality of upgrading outcomes was quite good (some CKIP households tended to rank interventions more critically than my observations). Interestingly, the quantitative analysis[9] indicates that participation did not significantly influence upgrading outcomes (Das 2008). For both programs, the results of regression models suggest that participants' empowerment likely affects better physical upgrading outcomes, or make them value upgrading outcomes more. The converse – that better upgrading outcomes in PSU make beneficiaries feel more empowered – was not found to be true. Just because a project delivers good upgrading outcomes, it need not make community members feel empowered. This applies more to the Indonesian communities since they have enjoyed good physical upgrading results even before the CKIP. Similarly, the qualitative analysis as well as descriptive statistics indicate that for extremely poor communities, such as those studied in Ahmedabad, the mere provision of basic services itself quite empowering. Thus, comparing the two programs suggests that a poorer household/community, with weaker human development indicators, experiences more empowerment for the same level/degree of participation than one with higher human development or economic status. A more deprived a household/community also values the provision of a basic service much more. A relatively privileged household/community with some access to services and institutions, on the other hand, needs more than modest upgrading interventions to value them as significant and feel empowered for participating.

[9] *Two-stage least squares (2SLS) regressions with instrumental variables were used to explore the influence of participation, and other variables, on empowerment.*

Table 4 Empowerment indicators

% of households reporting improvement in the following empowering dimensions after upgrading		
	SNP	CKIP
Variable	All	All
Happiness of the household	**87.4**	**46.0**
Control over life in general	**78.9**	**24.2**
Influence of household in community decisions	**85.9**	19.7
Influence/power of the community as a whole	**85.9**	21.2
Political awareness/activism of the household	**69.4**	13.1
Familiarity/access to legal/judicial remedies	42.2	7.1
Value of your land or house *[if owner]*	41.7	26.3
House rent *[if renter or renting part of house]*	24.6	11.1
Employment opportunities for household members	25.1	20.7
Income of household members	32.2	**21.7**
Education levels of [some] household members	43.7	**24.8**
Health of household members	62.8	19.2
Access to loans and credit	32.7	**33.3**
Formal savings of household/household members	39.7	20.2
Acquisition of material assets by household	40.7	16.7
Transportation/communication facilities in the community	64.3	**30.3**
Access to NGOs and other civil society groups by household/community	**79.4**	18.2
Access to government offices/officials by household/community	61.8	19.2
Household's relationships with other community members	**91.0**	**36.9**
Relationships of household's own community with other communities	**90.5**	**35.9**
Average cumulative reported improvement	***59.0***	***23.3***
N (number of observations)	199	198

The boldface figures indicate empowerment dimensions that received the most positive responses, while the shaded figures indicate those which received the least positive responses in the two programs.
Source: Author

10. CONCLUSIONS AND POLICY THOUGHTS

This discussion of the policy elements and program impacts of the SNP and the CKIP offers some very useful insights into the potentials and challenges of doing PSU in decentralized governance environments. The paper set out to analyze the implications of participation in terms of physical upgrading, community development, and empowerment – the objectives of PSU in the SNP and the CKIP. It shows that good physical upgrading outcomes clearly depend on the capacity of the local government agency or NGO involved, and it also depends on the robustness and flexibility of the institutional arrangements guiding the program. Physical upgrading was found to be less dependent on community participation because despite low-levels of participation the outcomes were usually quite satisfactory, even excellent. Community development outcomes (relatively less successful on the whole), on the other hand, seem to be closely tied to the expertise and motivations of

facilitator NGOs as well as the level of community participation. In part, this dissonance stems from the fact that while physical upgrading can be efficiently undertaken within strict timeframes, working with poor communities for community development is unpredictable and a less linear process. The evidence also makes it clear that community development activities guided solely by local government agencies without NGO support are unlikley to succeed. The paper demonstrates that outcomes vary across contexts because of each program's unique opportunity structure and project specifics and its situating context. Also, unless existing impediments within the larger opportunity structure are identified and addressed, merely having participation in slum upgrading projects is not likely to be highly empowering. In the CKIP national level regulatory frameworks, local politics, and cultural traditions constitute such impediments. In the SNP, impediments lie with state-level regulatory frameworks and a culture traditionally oppressive to women, yet national level regulatory frameworks and local socio-political histories boost the program's potential.

Given the widespread application of neo-liberal development ideas, both national and local governments find the notion of participatory development extremely attractive. It is quite true that community participation in physical upgrading delivers better outcomes than without it, and that it is preferable to integrate community development (socio-economic) with physical upgrading. The caveat, however, is to not think that merely introducing a participation component in policies and development programs such as PSU will empower poor communities. NGOs can play a vital role in enabling participation and supporting community development that leads to empowerment. However, to be effective, NGOs also need supportive opportunity structures and project specifics. Opportunity structures dependent on regulatory frameworks at higher levels of government are harder for local policymakers and planners to mend. However, it is through prudent design of project specifics that they can identify and overcome regressive elements of the local opportunity structures (governmental and societal) and greatly enhance the empowering potential of PSU like programs.

A contentious matter is to ask, against the flow of contemporary wisdom, whether we need participation for every community-level project, how much, and for how long. Both programs have less participation than what can be reasonably achieved – in terms of numbers or project stages. Yet both cities have achieved good physical upgrading because of dedicated stakeholders (local government and NGOs), and a level of trust that has evolved between them and the communities. Moreover, the quality of physical upgrading appears to contribute little to a household's sense of empowerment. An undisputed fact is that participation prolongs projects and can also make it more conflict prone. Thus, for providing basic physical services, the absence of which causes severe hardships to the poor, after a certain level of local institutional expertise and consistency in delivering

quality services, in certain places would it make sense to reduce active participation by communities in the interest of expediency and scaling-up? This rhetorical thought, of course, does not imply that a reduction in active participation means a lowering of accountability or transparency. Community development objectives, on the other hand, cannot be expected to yield superior outcomes without deep community involvement and ownership.

PSU is a powerful tool for improving the lives of the urban poor. It can empower as well as improve upgrading outcomes. An empowered community is more likely to get better upgrading outcomes. Together the contrasting experiences of these programs offer useful lessons and caveats to those interested in the practice of participatory urban planning and development. These are valuable lessons for other countries, especially in Southeast Asia, which are coming to terms with democratization and also seeking solutions for improving the lives of their slum populations. Much more international research is possible and needed to further our understanding of participation and empowerment in slum upgrading projects in post-decentralization governance environments

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INVITED PAPER

Auto Production Housing Process in Brazil: the Informational Practice Approach[10]

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ABSTRACT

It seems urgent for us to understand that the investments' amount concerning the Brazilian social housing in order to reach the so-called sustainable development is not just enormous but also impracticable. Still, the present housing production processes show that important interfaces need to be recognized and analysed before any other financial or administrative strategy is implemented.

We can't deny poor families, which historically have not been attended by the formal housing production processes, have found their own way to overcome their demands through the use of their own resources (no matter which). Since the beginning of the 20th Century, public policies have not been widely and coherently directed into the housing problematic, specially the ones concerning land access. It has been no other option to the low-income families but to create informal alternatives to access housing.

The favelas, essentially, spread out in Brazil after 1940. However, auto production has been possible only because it is linked to the daily reality built by the dwellers; or it is linked to the social practices daily established. This article argues that any social practice is an informational practice since any

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relationship means production, transfer and use of information. Here, the analysis of informational practice is made through the production, transfer and use of information between the individuals, for the individuals and from the individuals (all the ones involved with the auto production housing processes). Doing so, the production processes, materials, components, building systems, tools and equipments (difficulties, limits and benefits) can be brought up. We take a case study in Belo Horizonte to show that the informational practice approach can be a first step to feed a critical attitude in relation to the formal housing production processes.

Keywords: Autoproduction, Housing, Informational Practice.

1. INTRODUCTION

The high significance of architect N. John Habra ken's research (1972) goes for its personal conviction that users shall be part of the decision-making process when the matter in question is the space where they live. Considering the built environment as a transformation process continuously subjected to human intervention, Habra ken (1979) advocates the principle that architects not only must understand human values beyond the meaning of time and change, as they also have to develop designs based on flexibility, participation and qualification of users of such spaces.

Years have gone by since Habra ken devised his theory, and in the field of architecture some questions are still often raised: why should also the user decide about changes in his/her surrounding physical environment? What is the architects' interest in that?

Architects have great difficulty recognizing a place's social-historical construction and accepting that their works undergo modifications over time. If, on the one hand, the architects' discourse does at times refers to the urgent need for effectively employing their creative capacity to the benefit of users of the space in question, with a view to meeting their needs and wishes, on the other hand the main focus befalls on the design, construction and use of spaces for the sake of art or business.

In this scenario, most of the production in the field of architecture is exclusively conceived by a small group of people – architects as well as technicians, designers, developers or construction entrepreneurs. Within such logic, production processes are decided and controlled by a privileged few, while excluding the possibility of alternative modes of production whereby information and knowledge deriving from the immediate empirical experience of users and/or direct constructors and from their social practices could be acknowledged and taken into account.

Considering the argument that any social practice proper of everyday life is an informational practice, given that any relations among individuals presuppose information communication and transfer, the dwelling then starts

to be seen as an environment deserving investigation on inter-relations between information and the realms of everyday life, culture and society, as they unfold over time.

This paper proposes to analyze the dwelling – essentially a result of self-production – as an environment that carries within itself and conveys a volume of information historically built by collectiveness, including personal experiences and impressions of the individuals who produce said dwellings. This sociologies approach ties the information transfer and communication processes to human discourses – naturally of a social nature. This leads us to highlight social practices as conveyors of information (informational practices), a circumstance that lends to the physical-social space the suitable conditions to be seen as a fertile environment for acquisition of knowledge.

Our research findings are presented herein, though only in part. The productive processes involved in the auto production of dwellings: the informational practice approach as an input to discussions on the possibilities of devising production processes capable of mutually engaging users and direct constructors, as well as other agents - architects, engineers, construction workers, technicians, construction material manufacturers, industrial and commercial suppliers, and financing institutions, all of them being co-responsible for planning, design and execution of a dwelling (and of the city). Within the horizon of this proposal lies the increment of autonomous production, wherein architects may act as *mediators of information* which comes from the technical conception of a dwelling, the users' wishes, demands and circumstances, of whatever nature, and the materialization and production of built spaces.

2. AUTOPRODUCTION IN BRAZIL

Based on the study *A construção do desenvolvimento sustentado* (Building Sustainable Development) (FGV/UNC, 2006), the *União Nacional da Construção* (Brazilian National Construction Union) - despite the name, an employers' association) argues in favour of financial investment in the civil construction sector as a solution to reduce the existing housing deficit and to fund social dwelling. As their motto "growing means investing" undeniably denounces the exclusive concern for their own interests as entrepreneurs dealing in the civil construction production chain, it urges that we realize that the current housing production processes still feature important interfaces that need to be acknowledged and analyzed so that any effective perspective on the matter can still be presented.

A few verifications may help us achieve such understanding. The aforementioned FGV/UNC study (2006, p.35) demonstrates that, for each R$1.000 invested in formal construction, as much as R$858 are generated along the construction chain, whereas, in informal residential construction, the corresponding value generated amounts to R$790. Insofar as the construction materials trade is concerned, Serra (*apud* GRASSIOTTO,

GRASSIOTTO, 2003, p.134) points out that “autoconstructors account for more than 55% of overall cement consumption in Brazil, and for more than 50% of the entire construction materials market”. Indisputably, auto production represents an opportunity for expanding the current market share of Brazilian construction entrepreneurs.

Another important point about auto production is raised in a statement by Motta (2005): “the poorer families keep on taking their own initiatives to solve the housing problem, in conditions of informality, reaching portions of up to 50% of the population and of subnormal houses existing in important urban agglomerations located in metropolitan regions around the country”. We may ascertain that half of all housing construction in Brazil is represented by users who take their own isolate decisions with regard to production processes, without either the interference or participation of those who hold the coded knowledge (be it technical, juridical, social, or even environmental, historical, political, economic and cultural).

There is no denying the capacity of poor families – unattended by formal housing production processes – to meet their needs by their own means and resources (of whatever nature). Having in view that, since the 20th century, public policies and financial investments have not been broadly and coherently applied to face up to the housing problem, especially with regard to programs aimed at granting access to land and infrastructure of services, it becomes clear that low-income workers have been left with no other choice than that of creating informal alternatives for access to housing. Auto constructions – essentially slums (or ‘favelas’) – exploded in the late 1940’s. According to the UN report “The State of the World’s Cities 2006-2007”, 52 million people lived in Brazilian slums in 2005, representing 28% of the country’s overall population (BBC BRASIL, 2006).

Today, the existence of statistical data on Brazil’s housing deficit – nearly seven million units (FJP/CEI, 2005), reinforces the argument that neither the private nor the public sector has been capable of meeting the demand for housing posed by the working classes. Providing housing by means of controlled processes of mass construction and intensive capital injections from governments and construction industry has historically proved to be ineffective (HAMDI, 1991). Amazingly, this is still the prevailing practice under Brazil’s housing policies. One of the reasons for this continued scenario, according to Maricato (2000, p.122), is the existing misinformation about the “gigantic illegal occupation of urban soil” not only inside municipal departments in charge of approving projects through their teams of urbanists, but also within the universities.

Academic research recurrently attests to the great capacity of people to find their own housing solutions, but classify the auto constructor as someone who lacks enough knowledge to build houses in a planned manner, without waste and of good quality; moreover, they recommend formal design and the pre-definition of a construction system as guarantees for more

effective results.[12] Well, lack of coating, roofing or flooring, as well as thermal discomfort and inadequate articulation of the rooms certainly cannot be understood as a result of employing low technology or of having difficulties with space organization or management.

Figure 1. "Toothpick" (*palito*) house in Madre de Deus city, State of Bahia, Brazil: a six-people family lives in the 'toothpick' house. The building is 1.1m wide in front, 3m wide in the back, about 16 meters long and 11 meters high. "It took us three years to build the house, but this was not due to lack of a blueprint; it was for pure lack of money, actually. Practically, one year per storey". [Source: g1.globo.com]

In counter flow to that, it is worthwhile quoting Villaça's statement (1986, p. 31) that "the 'optimal' or 'correct' or 'ideal' housing standard is that which the working class sees as achievable, as a possible means to make headway through the political, social and economic conditions they find themselves in". In this sense, auto production is the possible alternative open to poor families in face of their political, social and economic conditions; such conditions are the determinants of formal production.

The thematic reorientation of research on housing production processes, according to Farah (1996, p.41) "tends to gain relevance [...] as a contribution in the search for alternatives to provide housing within a context of crisis". The author recalls that the emphasis of current research has been placed on the analysis of built environment distribution and consumption processes – having the State as the agent responsible for meeting the workers' needs –, rather than on the analysis of the production per se.

A focus adjustment, this is what we begin here. Until the early 19th century, constructions were carried out by slave force and by free workers organized in corporations and trained by transmission of empirical knowledge from specialized craftsmen - carpenters, masons, ironsmiths (FARAH,

[12] See, for instance, Grassiotto & Grassiotto (2003).

1996). Since then, the shift from practical knowledge held by the worker-entrepreneur to technical knowledge held by architects/engineers has consolidated the interests of formal production (controlled construction) at the expenses of auto production interests (response to the users' needs).

Well, if still today auto production configures itself as viable within Brazil's problematic housing reality, this is so because it is coupled with the way the daily life of poor families unfolds. In other words, auto production is tied to the manner through which everyday social practices establish themselves. Practice herein defined as "that which is decisive for the identity of a user or group, insofar as such identity allows them to take on their place amidst the network of social relations inscribed in that environment", in the words of De Certeau, Giard and Mayol (1996, p.40).

Far beyond the object-shelter sustained by walls and roofing, and serving as an element of protection against rain, sunlight, wind, animals and intruders, the dwelling inserts itself into the reality of everyday life. The people has built a body of substantial knowledge on how to better construct their houses and on how to connect to the urban services and infrastructure, as well as on how to benefit from or evade the public authority; this is a process of doing and learning through individual experiences, conveyed to others both formal and informally (HAMDI, 1991). The know-how-to-make a house (how, when, where and at what cost) is generated through information transferred via social practices.

3. AUTO PRODUCTION, INFORMATION AND KNOWLEDGE

We have started from the argument according to which any social practice proper of everyday life is an informational practice. This view is further expanded by the concept ascribed by Marteleto (1994, p.133) to information as a practice inserted "within a sociocultural context conducive to certain discourses, representations and values that inform each one's existence, providing to each individual a model of competence [...] to drive their lives and their relationships with other individuals and with the broader society". The individuals transfer and communicate information so as to recognize, interpret and convey meanings, that is, to act.

According to Brazilian educator Paulo Freire (1977), actions capable of transforming everyday life reality can be taken because the individual, faced with his/her presence in – and curiosity towards – the world, invents and reinvents her/him. Thus, as a function of the man/world (transforming) relations established by him/her, their *systems of knowledge* are constituted and may be improved by means of a critical problematization of said relations (FREIRE, 1977). In this sense, knowledge cannot come from a process in which someone passively receives information from someone else.

This point of view is further reinforced by Pierre Bourdieu's social theory (1999) according to which information is a social and cultural manifestation of

individuals positioned by the structure of the social space (field), coupled with the possession and possibility of access to knowledge (capital) and to each individual's social and cultural (habitués) biography.

Based on the dialogic communication theory conceived by Paulo Freire (1977), Araújo (1997) proposes an understanding of the information transfer and communication process as transformed and utilized by the individual in his/her daily life. If information transfer really takes place, then there also occurs an effective communication of information and, should the latter be incorporated into the individual's daily reality, knowledge is thus generated. As an outcome of this process, we have the individual's action.

In order to study information transfer and communication processes in the auto production, it is necessary to analyse the elements that shall guide the informational practice: the need, use and understanding of information. This paper aims to unveil such practice, starting from a systematization of information transfer and communication processes, in line with the perspective of Freire's participatory paradigm: "not only does the emitter conveys information but also the receptor feeds the former back with information related to his/her level of knowledge on the theme under discussion, as well as to his/her information needs and the degree of usefulness of the information received" (ARAÚJO, 1997, p.121).

To that effect, we adopt the four interrelated and mutually complementary knowledge systems proposed by Araújo (1997):

- The socio-cultural knowledge system, relative to the data-information and living experiences which the user/receptor (here, the auto producer) already holds on the theme being discussed;
- The technical-scientific knowledge system, or the "expert's" knowledge, derived from the information emitter. This is meant by when an auto producer (receptor) needs an information from someone (emitter) about an specific element from the building due to planning (construction and use), physical characteristics (dimensioning, circulation, articulation, spatiality, aesthetics), habitability conditions (insulation, illumination, ventilation, orientation), budget, purchasing and payment (labour, materials and equipments), site (location and property), technological possibilities, materials and building systems;
- The traditional or "experiential" knowledge system developed over time, both by the emitter and by the receptor. This is meant that anyone who builds her/his house shall have some level of knowledge about site works, foundations, structure, coating, roofing or flooring and so on (the habitués of Bourdieu).
- The last knowledge system refers to the socioeconomic reality within which the information transfer process unfolds.

Our own viewpoint is that a volume of information – technical, juridical, social as well as environmental, historical, political, economic and cultural, transferred and communicated between social groups, generates knowledge

on elements of auto production work processes – production stages, materials, components, tools and equipment. In other words, individuals act in order to learn how to build a house.
Nevertheless, the questions here are:

- If auto producers need information what are the actions taken by them?
- From where and from whom can auto producers obtain the information they seek?
- What means do they have to get what they are looking for?
- How they understand and use the information obtained?

4. MARIA AND GEOVANE

In order to unveil the production processes involved in auto production, we have interviewed a couple – Maria and Geovane – who resides in Ribeirão das Neves, a city located within the Belo Horizonte Metropolitan Region, Minas Gerais, and Brazil. The attitude of the interviewer – the author of this paper – was that proposed by Bourdieu (1998): active and methodical, demonstrating full availability towards the interviewee, submitting herself to the singularity of their particular story, adopting their language and viewpoints, remaining sensitive to their feelings and thoughts.

Maria and Geovane built their house in a 420 m2 (15 x 28 m) piece of land acquired in the early 70's in Ribeirão das Neves, Belo Horizonte Metropolitan Region, Minas Gerais, Brazil.

Figure 2. Geovane and Maria's home, aligned with their neighbours.

Geovane's knowledge systems – traditional/"experiential" and socio-cultural – were built from a brief experience as a bricklayer and upon his ability to learn the civil construction craft by watching his friends at work.

> "From 1969 till August 1971 I worked at construction sites. I worked as an assistant, but I was smart. I helped the masons, filled up boxes, grabbed a trowel and helped them splash cement on the wall, so that I could learn the craft."
> "I took a course in bricklaying back there at the Lindéia district church. I did small jobs for them so that I could learn more; I worked there even Sundays, stayed there all day long working on the church just so as to learn."

Geovane could obtain information, when it was needed or desired, along with their bricklayers' friends (the technical-scientific knowledge system). His social network allowed him not just to give opportunities on learning about building itself but also to assure the 'ideal' house for his family.

> "The bricklayer next door taught me. Many people helped me. We call people we trust to work for us, we ask for their prices; if the guy is good at what he does we pay him on a daily basis, we ask them how many days it should take. If I have a day off work, or if I'm on vacation or on an extended holiday, I become his assistant and help him do it."
> "I've always overseen the jobs; sometimes I don't know how to do it but know pretty well how to correct it. So I say: this thing here is not right; this is how you have to do it to get it right."
> "All decisions come from my own head. I haven't drawn anything, not even a sketch on a piece of paper. I just put it in my mind: I'll do it like this or like that. Nobody not even suggested anything. So, I didn't feel the need to look for an engineer or an architect because I had the knowledge myself."

Even though Geovane dreamt of a better-looking house, he used his clear-mindedness and critical sense to assess his options and choose the alternatives that would best meet his individual needs and aspirations, in a flexible way, be it with regard to construction, financing, ownership or management.

> "If I could, I'd build a prettier house. Unfortunately, I can't. But my house is well made, the roof won't leak; and it's mine, it's all paid for, thank God."

We can equally include here the questions regarding the program and technology used. All these aspects conforms Geovane's socio-economic knowledge system, not only ensure the immediate response to his demands, as it is also the secure possibilities of future changes (associated to evolving family composition and structure, expectations of comfort and efficiency).

> "As we first arrived here, it was just me and Maria. Since then I've already raised my 3 children, and later on my grandson. One of my sons lives here at the back of the house, in this small 2-room shed, with pre-fabricated slab, within my lot; I built it for him so that he could live here after he got married."

> "What always dictated my decisions was money. I never get into debts. I never bought material on credit. I buy it if I can; if not, I just wait one more week or wait till I make some more money."
> "Our small retail store was formerly a little shed I had built for my sister. You see, I'm getting old; I must at least sell some popcorn to pass the time. So I do some business every now and then, take my time, talk to people, and so the day goes by... and I keep busy..."
> "Things improved a bit, so I made this other room here. The house is all patched on, but as you see there's no cracking. What I did here was like an Indian's hut; from here I go out or to my shop. This is what people say an Indian house looks like: doors everywhere."

5. FINALIZING…

What can we learn from this report? Auto production – or the informal way by which people build, expand, improvise or add to their houses – indicates that:

- Physical changes made in the dwellings over time are a pre-requirement for growth and consolidation of communities;
- Flexibility promotes natural auto production, making for easy adaptations and permanent functionality;
- Auto production reflects the users' capacity to decide on the use of space, much beyond the mere satisfaction of their wishes;
- seen in the light of the aforementioned participatory paradigm, auto production reveals that the information produced, transferred and utilized generates knowledge on the know-how-to-build a house, thereby motivating, enabling and transforming the users.

Observing auto production allows a critical analysis to be made of the place's economic and social dynamics, which is capable of promoting the transformation of the current housing policies officially in force in the country. A closer analysis reveals that present policies are far from being capable of promoting the autonomy of dwellers as required so that they can effectively intervene in the housing production processes. Rigid typological models – resulting from formal constructive and technical determinations set by the construction industry or the formal city – are still put forth as a solution for the housing shortage.

Moreover, such architectural answers completely overlook the users' capacity to deal with their own demands. The privileged few responsible for the formal city lack a conscientious and rational use of the architect intelligence and mediation capacity. Our point of view is that gradual, continuous and suitable investments should be made so that the real contributions of auto production could be expanded, which requires consideration for the necessary dialog among all participants in the housing production processes.

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INVITED PAPER

The Impact of Finance Facilities in Kenya's Informal Settlements' Upgrading

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ABSTRACT

Informal settlements in Kenya have been on the Government's upgrading agenda from the 1980s and aims at improving the living standards of the inhabitants through physical infrastructural development and social interventions. With projected increase in slum population in major urban areas of Nairobi, Mombasa and Kisumu, the interventions for upgrading are expected to grow too.

Many Non Governmental Organizations (NGOs) including the UN-HABITAT and the World Bank in collaboration with Kenya government have made attempts to provide capitalized funds through various programmes to augment investments in upgrading of slums. Many of these programs have not achieved their original slums upgrading goal. This paper through comprehensive review of secondary materials, analyses the impact of some of these programs in the upgrading process, what they have achieved and the obstacles they have encountered upon implementation.

The development of new products by lending institutions and a combination of participatory approach, legal frameworks regarding land tenure and Governments' commitment is seen as the way forward in making these programmes succeed.

Keywords: finance facilities, informal settlements, interventions, slums

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1. INTRODUCTION

Kenya covers a total land area of 569,259 square km. and its population is currently estimated at 38 million. The level of urbanization in 2000 was 33.4% and it is expected to go up to 50.8% by 2020, indicating a growth rate of 3.76% in the next 15 years (HABITAT 2003: Table B.2). According to government projections, Nairobi, Mombasa and Kisumu had 4.5 million inhabitants by 2005, with about half of these living in informal settlements. Urban population growth rate has increased steadily estimated from 5.4% in the 1960s, 7.9% between 1969 and 1979, and 8% in the 1980s to the current 15% per annum. This directly translates to an increase in population from 747,651 in 1948 to 16 million in 2005 (RoK, 2002a).

The main challenge facing the urban areas due to increase in population is the mushrooming of informal settlements characterised by deficient housing and homelessness. The contributors to these problems range from land tenure legislations issues to cost of building materials and mortgage financing.

From independence the government has instituted a pragmatic housing provision policy that have immensely contributed to the flourishing of informal settlements as witnessed today. There is still lack of clear policy that can facilitate and guide urban development, since many upgrading projects are made on ad hoc basis (HABITAT 2003: 219-220). Many efforts have been made with intangible outcomes, due to top-down approach and less regard to residents views (Pellikka et al, 2004) while land use management systems and laws are overlapping and mixed in urban areas. This makes land use planning difficult to enforce because of intense land divisions, legal regulations of transactions and powerful elites interests (Leach 2000).

To counter this effect, the government in its Poverty reduction paper of 2004 stipulates its commitment to enhance resources to improve shelter and living conditions in informal settlements (RoK, 2004). This commitment is evident in some collaboration made with World Bank and UN-HABITAT in slum upgrading programmes.

From the 1980s the government has engaged the private sector in productively integrating the slum dwellers into the urban development process. This has seen remarkable involvement of many Non Governmental Organizations (NGOs) and international development agencies in various upgrading projects. Regrettably these interventions are a drop in the ocean since informal settlements have continued to grow unabatedly in many urban centres in Kenya.

2. FINANCIAL FACILITIES AND PROGRAMS

UN-HABITAT defines a financial facility as an institution set up to help community groups access credit from the local commercial banks, which may take the form of independent not-for-profit companies hosted by existing local financial bodies (HABITAT 2008), while a program in context of this paper refers to an initiative by the government through funding support from a donor agency, charged with the objective of upgrading informal settlements.

Mcleod (2004: p9) outlines Slum upgrading facility, created by UN habitat and overseen by Cities Alliance, as offering the following among others:

1. Financial "packaging" advice to municipalities, Non Governmental Organizations (NGOs), Community Based Organizations (CBOs) and financial institutions in structuring slum upgrading, low income housing and related municipal infrastructure projects to make them financially viable and bankable.
2. Supporting NGOs and CBOs to enhance their capacity and be effective partners to municipalities in upgrading schemes as well as to develop their ability to promote and scale up community based initiatives.
3. Providing rapid response advice to agencies and groups on slum upgrading, low income housing and infrastructural development and finance.
4. Providing catalytic financing in the form of seed money, bridge or working capital and funding of pilot operations to help promote innovations as well as jumpstarting upgrading schemes.

Kenya's strategic framework in the Poverty Reduction Strategy Paper of 2004, stipulates the National Housing Policy and National Plan of Action on Habitat Agenda on Shelter and Housing Settlements. It recognizes slum upgrading as integral part of shelter development and emphasizes the governments' commitment in conjunction with development agencies, to systematically improve the living environment of slum settlements by providing the basic infrastructural services and affordable housing in all urban centres.

Among the many initiatives undertaken in Kenya to upgrade informal settlements and discussed herein are; The Upgrading Project of Tanzania-Bondeni started in 1991, The Mathare 4A upgrading programme which began in 1995, The Kenya Slum Upgrading Programme (KENSUP) for Nairobi and Kisumu initiated in 2004 and finally the Korogocho Slum Upgrading programme of 2008.

Tanzania- Bondeni Small Towns Development Project

Through the Community Land Trust Project (CLT) and GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) initiative in collaboration with the Local Government, the Small Towns Development Project (STDP) of Tanzania-Bondeni slum area of Voi Municipal Council was undertaken from 1991-2004 (RoK & GTZ 1996:23). The CLT was an innovative land tenure model for enhanced sustainable security of tenure for beneficiaries which ensured that the land remained with the community.

Before the project implementation, this area was characterised with myriad of informal settlement problems, and the residents not only occupied land partly owned by the Government, Kenya Railways and a private sisal factory, but also the houses constructed were wanting coupled with the permanent fear of eviction (World Bank 2000).

This project was part of a US $7 million programme on STDP and was based on two major principles: first was to identify the needs of the squatters and carryout physical improvements in the settlements; second was for the beneficiaries to pay for the infrastructural improvements and security of tenure in order to make the project replicable and sustainable. The basic idea of CLT was to have land market accessible to the poor by empowering the community to own the land while individual members owned developments and improvements which they had undertaken on the plots. They could inherit or bequeath these developments, and in case one opted out, he could only sell the developments but not the land which was community owned (RoK & GTZ 1996)

The achievement of this project according to Pellika (2004), can be summed up as security of tenure; construction of new houses; opening of new access road; building of a nursery school and a dispensary. The challenges that remained untackled when the project wound up in 2004 were the construction of better sanitation and sewage system; acquisition of title deeds for the land and connecting electricity to the new houses.

Mathare 4A Upgrading Programme

The Mathare 4A slum rehabilitation programme of 1995 was entered into between the Kenya Government as leaseholders, the Catholic Archdiocese of Nairobi as trustees and The German Financial Corporation as financiers at a tune of US$ 6 million (Kusienya, 2004). Initially the project had the objective of improving slum housing conditions but this gradually changed after needs and priority assessment was done. Eventually physical infrastructural development was ranked first, followed closely by community facilities such as health centres and schools and finally support towards income generating activities for the slum dwellers was to be considered later.

The total population of the area before the onset of the project was estimated at thirty thousand people living within 8700 rooms (MOPW, 1992). Out of these 92% were tenants while only 8% were landlords (referred to as slum lords). 'Slum lords' proved a challenge to this programme. Approximately US $ 800,000 was paid out to them as compensation for structures comprising 7300 rooms built on land the 'slum lords' claimed as theirs (Kusienya, 2004).

With the rising poverty levels it was difficult to strike a balance between sustainability and affordability. Though the Government had transferred the land to the project (Amani Housing Trust), any rent increments by the management was stiffly resisted. Political interference and negative media reports saw the project suspended in February 1999 due to constant clashes between residents and the Nairobi City Council.

The project resumed in February 2003, and so far over 1500 new and better designed rooms have been constructed using stabilized soil blocks. Foot paths, sanitation and water points have also been provided, employment opportunities for the targeted groups within the programme through participatory approach, was created thus transforming and creating better living environment for the residents. Part of the success of this programme is credited to Amani Housing Trust which was non-partisan in highly politically charged environment since it ensured fair allocation of houses and affordable rents to cater for the poorest among the target groups (Waruguru and Ngari, 2002).

The Kenya Slum Upgrading Programme (KENSUP)

In its endeavour to upgrade slums within urban areas the Government in collaboration with the United Nations Settlements Programme (UNHABITAT) and Cities Alliance Initiative, entered into a Memorandum of Understanding in January 2003 for a long-term Slum Upgrading Programme. The main objectives among others is to produce/improve 45,000 units annually at an approximate cost of US $ 440,000,000 and operationalize the concepts of decentralization, partnerships, consultation, stakeholder participation, leadership and the empowerment of beneficiary communities in upgrading projects. Other objectives were: to bring together key players involved in city and national level slum upgrading strategies to address the challenge of financing; to catalyze the integration of commercial finance into slum upgrading; to provide mechanisms to blend different forms of funding to maximize affordability and finally to provide financial mechanisms to support the implementation of city based slums and settlement upgrading strategies (HABITAT 2008)

In Nairobi the project targeted 600,000 people living in on 110 hectares in Kibera's Soweto area, while in Kisumu the initiative is still under

development since the slum land is still privately held under freehold title. In situ upgrading is seen as viable in Kisumu (Huchzermeyer, 2006). The upgrading is to redevelop the slums into orderly blocks of flats with 50m2 two bedroom units to be privately owned.

Residents however have reservations on this project since similar approach of early 1990s were riddled in corruption that saw the new houses allocated to middle class income earners thus locking out the genuine tenants, therefore a repeat of the same is loathed. Lack of community participation in committees (Settlement Executive Committee) involved with the project has aggravated the problem. The presence of many Non Governmental Organizations with no clear-cut agenda catalyzed and added to the jinx. This has led to the formation of a parallel outfit Slums Settlement Forum (SSF), but the government is in the process of uniting the two factions.

Another bone of contention is the rent to be paid for the new structures. Residents insist on paying the same amount they used to pay before the construction of the new houses, while the land owners also want to be allocated all the houses constructed on their pieces of land.

Achievements of the project according to the Government website (www.housing.co.ke) are the completion of 600 housing units to be used for relocation of families as upgrading is undertaken, the construction of critical social infrastructure such as roads, sewage systems, electricity sanitation and garbage collection. Formation and registration of cooperative societies by residents that have raised money to be used as mortgage to secure houses for its members is noted even though, the residents are yet to reap the benefits of this programme.

Korogocho Slum Upgrading Programme

This is a joint initiative of the Government with funding support through a debt for development swap entered into by the Italian Government. The expected outcome is a sustainable integrated upgrading through consultative process involving the community, Community Based Organizations (CBOs) and Faith Based Organizations (FBOs) that aims at improving the lives of the slum dwellers in line with the Millennium Development Goals. The programme implementation time is two years at a cost of US $ 2.7 million.

Korogocho slum made is up of 7 villages housing some 120,000 dwellers crammed within a single square kilometre area in households enumerated at 18,537 (RoK, 2008). It is ranked fourth in the size of population after Kibera, Mathare and Mukuru Kwa Jenga slums of Nairobi. Over half of the land is State property and the rest is privately owned, but a stark socio-economic reality of poverty is evident: there are no public

services and the absence of the State interms of service provision is keenly felt. 70% of the Korogocho population is less than 30 years of age; regrettably only 2 City Council schools cater for over 3,500 children.

Since this programme is at infancy, the experience is expected to inform policy direction in dealing with upgrading programmes and upon successful implementation, more donor support based on debt conversion to development grant is envisaged. The first phase is meant to provide the community and the Government with the necessary resources to manage this programme. It includes logistical expenses, support to the management team and hiring of consultants. This will be used to effect participatory planning to realize the Programme objectives and create community harmony for purposes of successfully implementing the Programme. The participatory approach of more community involvement and less political interference gives a glimmer of hope for the projects' success.

3. POLICY FRAMEWORK

Despite the Government ratifying the United Nations' International Covenant on Economic and Socio-cultural Rights of 1966 Article 11 part 1 (www.unhchr.ch), informal settlements continue to mushroom in urban areas. Many slum dwellers continue to live in deplorable housing conditions and abject poverty. From independence, the key interventions for the housing sector include formulation of Sessional Paper No.5 of 1966/67 which stated the national strategy for shelter to the year 2000. It advocated for slum clearance and resource mobilization for housing development, and to provide the maximum number of people with adequate shelter and healthy environment at the lowest possible cost. Not much was done as recommended, and this contributed to some extent, the unchecked growth of informal settlements.

Sessional Paper No. 3 of 2004 (RoK 2004) acknowledged that high priority be given to upgrading of slums and be undertaken with minimal displacement to cater for proper planning and provision of basic infrastructural facilities and services of the target community. Moreover, there was need to streamline acquisition of land for housing the poor, adopt appropriate land tenure systems and planning standards that suit given slum settlements. It was also upon the Government to facilitate slums upgrading through integrated institutional framework that accommodated participatory approaches involving the relevant stakeholders and the target communities.

Pertinent issues stipulated in this policy framework include land; Infrastructure; Building materials and financial resources (RoK 2004). It argues that if these proposals are implemented, then maximum benefits will be achieved for all those concerned in the upgrading process.

3.1 Land

Lack of comprehensive land use, planning and management policy has compromised land related matters which are sensitive with deep socio-economic and political impacts. Issues of land sale approval/consent procedures and subdivision are lengthy and complicated as there are too many statutes which mitigate against this. The transfer, documentation, processing fees and stamp duty rates are still way beyond the reach of many slum dwellers. In this regard the Government has proposed a policy to increase the accessibility to affordable and serviceable land while providing legal security of tenure to the poor, and also providing incentives to residents in informal settlements to buy the land they occupy at subsidized rates. Land tenure issues have been a drawback in developing financial products that are viable since land cannot be used as collateral without title deed or letters of allotment.

3.2 Infrastructure

Upgrading of informal settlements require installation and maintenance of infrastructure such as water, sewage, roads, electricity, social services and security. Lack of the basic infrastructure is a serious setback to this process. Poor planning in slums means the displacement of some residents to pave way for laying infrastructure. The government proposes a policy to facilitate slum communities willing to contribute their labour and resources towards the improvement of on-site infrastructure and advocate use of construction technologies that are cost effective, environmentally sound and incrementally upgradable with emphasis on labour intensive technologies.

3.3 Building Materials

High production costs of building materials locally, coupled with high transportation costs has impacted negatively on the Government's efforts to provide affordable housing. The issue of inappropriate building standards and range of approved building materials has not made it easier either. Blame has been directed to lack of extensive research on building materials on one hand and insufficient funding for research on the other. Within such a scenario, upgrading programmes become expensive to implement. As a policy the Government proposes to encourage production of innovative building designs that are cost effective and compatible with the use of locally available and affordable materials; facilitate research on building materials and technologies and review the building standards from time to time.

3.4 Financial Resources

The sources of housing finance are few thus locking out many informal settlement residents. This is aggravated by inappropriate fiscal policies, high interest rates on mortgages and low affordability due to poverty. Financial facilities proposed by different agencies are forced to operate within the existing legal frameworks which make them less effective over time. A policy is intended to amend the existing laws on micro-financing and create the slum upgrading low-cost housing infrastructural development fund and broaden the base of housing finance sources. Also proposed is micro financing and informal funding mechanisms for the very low income groups especially in the informal settlements.

Cities Alliance (2003) in its analysis of housing finance in Kenya concludes that in the near term, the enabling environment is not conducive for the development of widespread housing microfinance and non-financial advocacy approach are necessary to break the current stalemate. It therefore, recommends the following strategies among others:

1. Mortgages are not necessarily the most secure guarantee particularly when financing the housing needs of poor households' instead short term loans for progressive construction with household assets guarantees are less risky than long term mortgages.
2. Progressive building increases affordability for low income group, by focusing on step by step building financing instead of all-at-once development.
3. Conditions on donor financing of microfinance institutions often reduce the ability to experiment with housing microfinance and allow them create viable finance products that have greater reach potential.
4. Combining financing with other advocacy, legal or constructional issues may overly complicate the programme in early stages and in turn slow down the programme.

The above considerations should be taken into account if upgrading of informal settlements is to achieve its objectives.

4. LESSONS LEARNT AND THE WAY FORWARD

Many slum dwellers confuse slum upgrading with the construction of new houses or the displacement of the original slum residents to construct houses for middle income groups on the pretext of upgrading. Residents should be made aware that the process of upgrading aims at uplifting the living standard of all the people within the slum areas and not benefit a few

individuals or enrich the slum lords so that they can increase their rent collection. There is need for proper sensitization of the masses on what upgrading projects entail and the level of commitment and participation expected from communities involved. Participation in decision making is seen as an instrument of achieving greater effectiveness in the implementation of public policies. Residents through participatory approach should be allowed to be part of the decision making process on matters that affect them directly and not be dictated upon. More emphasis should be laid on bottom-up approach instead of top-down. Successful upgrading cases are based on community participation in upgrading programmes and build on their own innovative solutions and formally recognized Community Based Organizations (UN-HABITAT 2003). They may also propose financial facilities and products that are flexible and favourable to their conditions.

The challenges to housing finance are: affordability for low and middle-income households who cannot afford the debt service required to finance even a minimum core unit; Stringent loan conditions that are not pro-poor since traditional mortgages require full legal land titles as security, while the urban poor live in conditions of insecure tenure; and few incentives by financial institutions to lend to the poor because of high transaction costs in verifying creditworthiness which hinders innovation in reaching to the poor. These can be overcome if funds made available through the various programmes are treated as seed money that should generate more and ensure sustainability of the projects and never be mistaken for hand outs. There is need for these communities to be well organized inform of cooperative societies so as to access these funds if a project serves such a purpose. Financial products targeting the poor should also be developed and encouraged.

The government should also create an enabling economic environment that can woo investors and the private sector into contributing towards economic growth of the country. This ensures that employment opportunities are created and many people can afford better housing, thus keeping informal settlements growth checked and also ensure that the running programmes are completed as scheduled.

Within an unpredictable and volatile political environment, many programmes tend to be suspended, first because of the future uncertainties and commitments and secondly, due to unwillingness of the new Government to keep its part of the bargain in previously signed agreements. Furthermore, corruption within government ranks also disrepute the objectives of these programmes and not only waters down donors' confidence but also that of the residents, who treat each new programme and initiative as a ploy to get rid of them.

Cumbersome regulatory policy frameworks also act against smooth running of programmes. These bureaucratic and time consuming procedures hinder implementation and discourage slum dwellers from engaging in

anything legal with the Government, moreover, the duty and taxes to be paid are far beyond them and the uncertainty of fulfilling all the tasks for land acquisition or subdivision are daunting.

For the above issues to be addressed the Government needs to show its political will and commitment to make these programmes succeed and not politicize issues regarding land tenure which often spark confrontations between the local authorities, slum lords and the residents.

5. CONCLUSION

The complexity, diversity and dynamism of financial facilities in housing issues and delivery processes plus the interaction with forces of politics and economics, calls for the development of legal frameworks defining levels of interaction among all the actors is seen as a way to counter the myriad of issues identified. The prevention of new informal settlements is critical to the sustainability of the finance solutions by these programmes, therefore, legal frameworks for land development and regulation will negate illegal occupations and encourage production of affordable housing with minimum conflicts.

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http://www.housing.co.ke Government of Kenya Ministry of Housing

SUB TOPIC 1

Sustainable concept of planning, housing policy and approach for slum upgrading in urban area

1 - 1

A Private Space Concept in Mixed Area (Slum-Squatter)

Case Study : Pringgading Kampong Of Rt 01/Rw Vii Kelurahan Setabelan, Kecamatan Banjarsari Surakarta

Dyah Susilowati Pradnya Paramita[1]

ABSTRACT

Pringgading kampong of RT 01/RW VII is an area of a crowded settlement that is located at North side of the Pepe's river bank in Surakarta. The houses are crowded and dirty. There are shacks between houses in Pringgading kampong of RT 01/RW VII. Some houses are in bad condition, but on majority, the houses are in good condition. The majority of inhabitants in Pringgading kampong of RT 01/RW VII was in low-income economic condition. This house condition at Pringgading kampong of RT 01/RW VII there is no clear separation between people who live in the slums and squatters. Most inhabitants got their income from selling of food and snacks and some do other works, such as: pedicap drivers, seamstresses and food vendors. The inhabitants work at the alley at the Pepe's river bank in Pringgading kampong of RT 01/RW VII. Based on activities done there, some alleys had changed their function from a street facility to a working area. The houses are two and one storey houses. In 2 storey houses, the bedrooms are upstairs while in storey houses. The inhabitants used bunk beds, placed in a private space.

This research was done using Naturalistic Qualitative method for 8 months. Sampling was used as the unit of exploration and the analysis consisted of 45 houses that located at the 4th alley of the Pepe's river bank. For

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observation, the researcher always explored every data and took information from some sources. The researcher collected data using Purposive Sampling technique, Snowball Sampling technique and Cross Sectional system.

The result of this research showed that, generally, low-income inhabitants in Pringgading kampong of RT 01/RW VII were always need of private spaces than working places. Low-income inhabitants made private space as a special area. Also the condition of private spaces were not influenced by and separated from of working areas.

Keywords: alley, daily activities, private spaces

1. INTRODUCTION

Pringgading kampong is an area of a crowded settlement located on the North side of the Pepe's river bank. This is the location of home industries; food and snacks. Cooking was important for the inhabitants of these alleys. Other inhabitants had other works, such as pedicap drivers, seamstresses and food vendors. Also, the inhabitants did their daily activities, such as,: washing, selling things , bathing, eating, interacting , gromming birds and drying chlotes along some alleys of the Pepe's river bank. One area with special existence that was used as the research location was the area of RT 01/RW VII. The research location in Pringgading kampong of RT 01/ RW VII is shown on figure 1 :

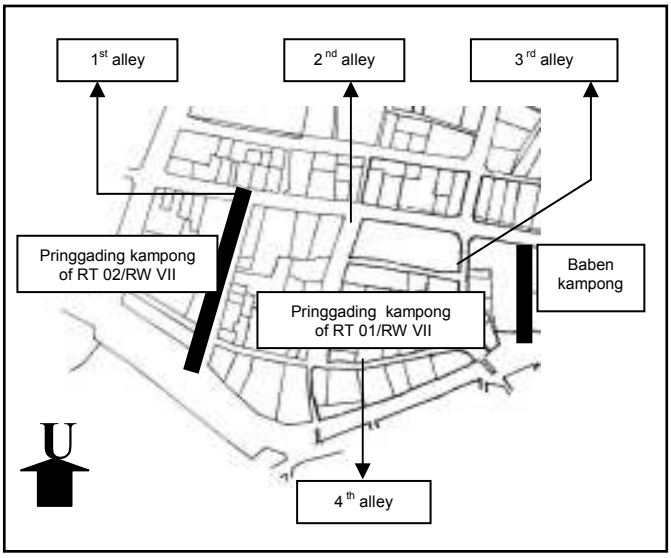


Figure 1. Pringgading kampong Map
Source: Dinas Tata Kota Surakarta, 2005

Sample kinds of work and activities along some alleys of the Pepe's river bank, RT 01/ RW VII, are shown on figures 2 :

Figures 2. Sample kinds of work and activities at Pringgading kampong of RT01/RW VII
Source : Researcher's analysis, 2008

Some alleys functioned not only as streets but also for working and socializing areas. Because the inhabitants worked at the alleys, the majority of their houses were always empty of activities. There houses acted only as temporary shelters functioned as sleeping and safekeeping quarters. This fact was shown on figures 3 :

Figures 3 Some condition of houses at Pringgading kampong of RT 01/RW VII
Source : Researcher's analysis, 200

2. HOUSES AND ENVIRONMENT CONDITION AT PRINGGADING KAMPONG

The houses were crowded and dirty. There were shacks between houses in Pringgading kampong. Some houses were in bad condition, but in majority, the houses were in good condition. The majority of the inhabitants in Pringgading kampong of RT 01/RW VII is in low-income economic condition. The condition of the houses were mixed between inhabitants who lived in slums and the squatters. The houses at Pringgading kampong of RT 01/RW VII were mainly two storey houses. The first floor functioned as a business working area while the second floor functioned as sleeping and safekeeping quarters. The constructions were strong and their façades were attractive. However, although the constructions of the houses were strong, some houses had very simple building materials, consisted of wood remnants, plastics, and iron sheetings. Moreover, the arrangement and the houses environment depended on each inhabitant activities. The trash was usually thrown away into the dump but sometimes the inhabitants threw the trash away the Pepe's river. Some alleys were always clean so person could pass easily. Communal sanitation facilities in Pringgading kampong were used together by the inhabitants.

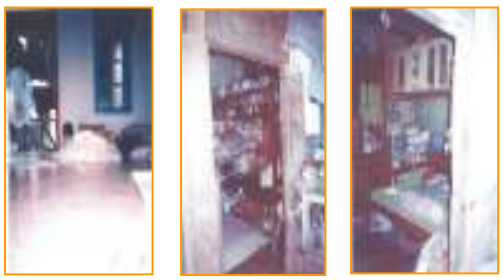
3. DISCUSSION

3.1 The Position of the bedroom

The bedroom was a separated area, different from daily activities area. Every morning, the condition of the bedroom was not only clean and neat but also silent and empty from anybody and activity. Inhabitants were rarely in the house. They were more often at open spaces in front of their houses. In the morning, the inhabitants did their activities on the first floor and at along some alleys of the Pepe's river bank. Meanwhile every time they needed a rest, the bedroom became important, functioned as a private space. Almost every night, the bedroom became silent and empty. The inhabitants worked, involved in cooking activities. The physical condition of bedrooms was mainly simple. The contained a mattress, without a bed. The mattress was placed on the plastic and sleeping mat, which covered the floor made of wood remnants. The4re were also a wardrobe, some books, a television, a radio, some family photographs on the wall and clothes either dry or wet. There weren't any bag, wallet, or other personal things inside the bedroom. The condition of the bedroom did not reflect the low-income level of the inhabitants. A two storey houses always had a bedroom upstairs, meanwhile a one storey houses always had a bedroom on the corner of the house. Too keep their house clean, the inhabitants put a door mat and placed shoes out side their houses. The location of the bedroom are shown on figures 4 :

Some bedroom conditions of inhabitant's houses at 1st alley

Some bedroom conditions of inhabitant's houses at 4th alley



Some bedroom conditions of inhabitant's houses at 3rd alley

Figures 4. Some bedroom conditions of inhabitant's houses at Pringgading kampong of RT 01/RW VII
Source : Researcher's analysis, 2008

Cleanness and neatness factors were applied on majority of the bedrooms. Conciousness about cleanness and neatness factors were deeply understood by the inhabitants at Pringgading kampong of RT 01/RW VII. The position of a bedroom was as a private space, a special place separated from their daily activities. Cleanness and neatness factors had became stimulant factors of economic situation when the inhabitants of Pringgading kampong enjoyed their lives.

3.2 Neighborhood connection

The inhabitants of Pringgading kampong of RT 01/RW VII had kinship other inhabitants at 1st ,2nd ,3rd and 4th alleys. They had powerful mental bonds. This familial mental bond influenced their relation with their neighbor and caused free and open condition. On the alley, a number of men often showed naked to the waist while women often showed with only a towel covered their bodies. Houses lining along some alleys of the Pepe's river bank felt more like one room or one side of a mansion for the inhabitants.

Every morning, the inhabitants interacted in front of their houses while they work. Meanwhile every afternoon, the intensity of interaction lessened because they prepared to cook or to do other work. In the evening, the inhabitants did not meet often because they were very busy cutting vegetables, cooking, and selling food. There was a close social interaction and freedom, like a familial mental bond of real family. Nevertheless when connected to the economic factors, a boundary was built. There was a phenomena of static interaction and activity at the same place. The width of each inhabitant economic space was limited to the width of his/her house,otherwise he/she would bother his/her neighbor's space. A stranger's or inhabitant's position on a space of interaction would influence behavior of the inhabitant, and space of interaction became a closed characteristic too.

Some alleys changed their functions, became part of a house functioned as a working area. The inhabitants never borrowed cooking appliances from others and they never lost those appliances too, because they were very protective, always busy cooking, and there were always somebody awoke doing and watching things. The placement of things and some activities had created special condition in each alley. The condition is shown on figures 5 :

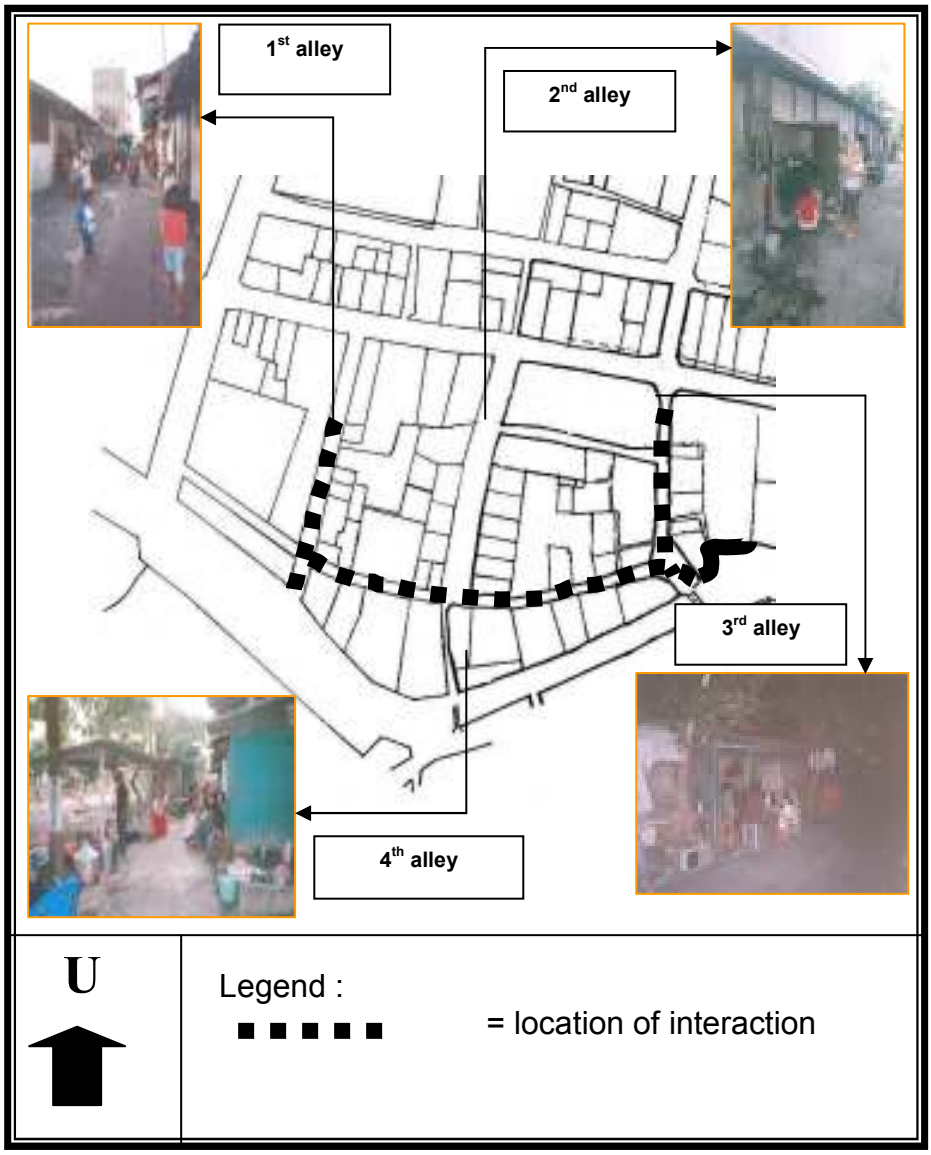


Figure 5. Location of interaction at Pringgading kampong of RT 01/RW VII
Source : Researcher's analysis, 2008

3.3 The working place

Inhabitants at Pringgading kampong of RT 01/RW VII used some alleys in front of their houses along the Pepe's river bank as working places. There was no boundary between the working place and a place to go through. Strangers could pass along some alleys but some working activities, inhabitant's positions, cooking appliances, and housing equipments in front of the house became hindrance. The working place was their terrace up across the alley. The widht of their working places was the width of the alley in front of their houses. The working activities and the practice of placing things at the alley created binding situation.This condition became the base of transparent space form on every alley that would be felt by strangers when they passed in some alleys river bank namely 1st ,2nd ,3rd and 4th alleys. Moreover, eye contact between a stranger and the inhabitant became a boundary factor too. A transparent space phenomena was a boundary form of an alley and became closed a characteristic. This condition is shown on figure 6 :

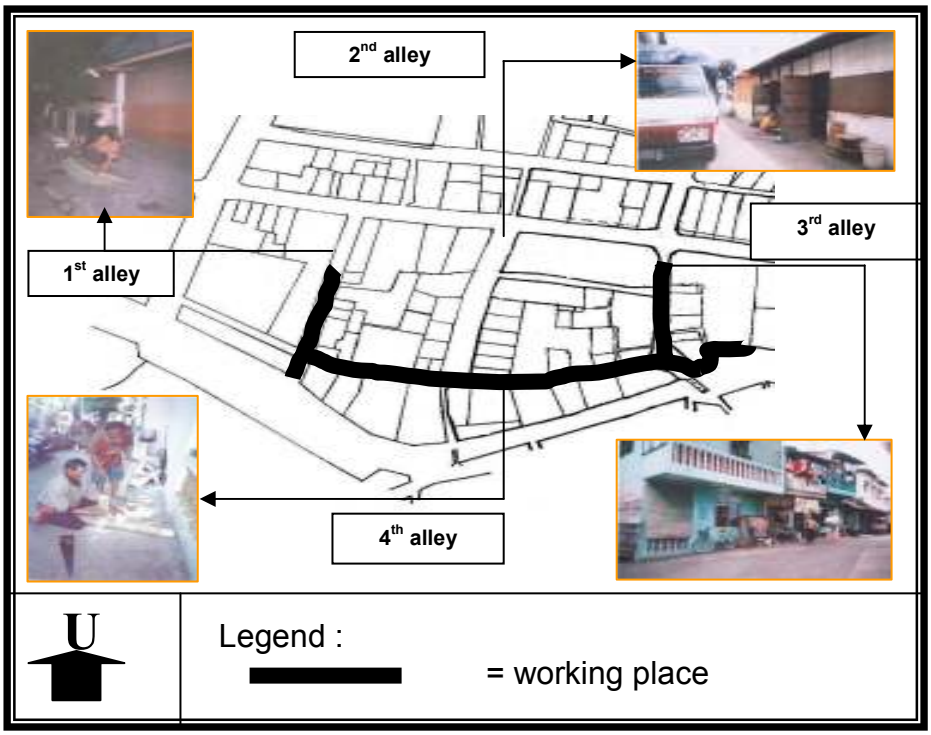


Figure 6. Working place at Pringgading kampong of RT 01/RW VII
Source : Researcher's analysis, 2008

4. CONCLUSION

The result of this research showed that, generally, low-income inhabitants in Pringgading kampong of RT 01/RW VII were always need of private spaces than working places. Low-income inhabitants made private space as a special area. Also the condition of private spaces were not influenced by and separated from of working areas .

5. RECOMMENDATION

1. A kampong with special characteristics need to be safeguarded even made into a potential object of tourism in a city
2. An evaluation schedule of maintenance must be applied on a kampong with special characteristics
3. The potential ability of a kampong with special characteristics can develop citizen's income in a city
4. A private space in low-income society need to be maintenanced to prevent confusing situation

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1 - 2

Housing Career Characteristic in Urban Slum Area
(Case: Bandarharjo, Semarang)

Santy Paulla Dewi

ABSTRACT

Generally, every human being has preference to live in comfort home and suits with their need. Budihardjo (1991: 56) said that home is not ending product, but evolutional, sustain and incremental development process. Its implication is repairing home or moving to other home, it's called housing career. Housing career characteristic in urban slum area differ with other place. The factor differ is land status, that Semarang government's property and Bandarharjo societies just have the right utility to wear. This housing career characteristic is evaluated from dwelling pattern, time of live, home status, repairing home activity, job, and biological factors: amount of family, also economic factors: income.

Housing career in Bandarharjo is more at improving home quality (home repair), than heightening house building in order not to be suffused when floods and rob happen. While to extend the house (room addition) is enable because land limitation and high settlement density. So, the family addition does not following with room addition. This activity has been doen by people that omit at Bandarharjo for more than 20 years, and usually they live in permanent home. While people that omit less than 20 year at Bandarharjo tend to live in temporary home (rent house). Because live in temporary home, many of them do not try to increase their home quality. Even they live in permanent home, usually its parent heritage home. Phenomenon of moving to other home outside Bandarharjo is rare. It's because of incomes limitation and to sell the previously house felt difficult because the land status representing Semarang governmental property. The income addition tends to home repair than to buy another home. Moving to other home but still in Bandarharjo area a lot of conducted by new young couple marry by the reason of independence (move from parental home). This moving is conducted in near distance because consanguinity relation reason (related

emotionally) and tend at temporary home. This consanguinity relation is because of strong defensive solidarity as migrant in slum area. This housing career phenomenon indicates of sustainable community in urban slum area.

Key words: housing career, urban slum area

1. INTRODUCTION

Premature urbanization which happened in many towns of Indonesia generates various problems. Like environmental problems till high population density which inversely proportional with the accomplishment of public infrastructure and housing. Its implication is a lot of slum area appearance in urban periphery that grow spontaneously.

Housing as one's of the human basic needs always serve maximally. Generally, everybody wants to live in the balmy home and suits with their wanted. But it's a difficult thing, caused by some constraint. Like low income, that most of it used to fulfil daily needs. Housing status correspond to the live cycle. In pre child step, they tend to live in parental house. In the next step, after marrying (young adult) they move to temporary house (rent house) considering their financial ability which not established yet. After establishing in finance, they move from temporary house to permanent house. This matter is later called housing career. Housing career do not only about the house movement according to the live cycle, but also related to economic ability, related to improvement of housing quality (repair or renovate the house). These perspectives constituted at opinion that house do not only as one's of the human basic need, but also as a investment. Therefore somebody will always improve the house quality and its condition to increase the investment value.

Housing career characteristic in urban slum area perhaps differently with the others area. Bandarharjo is one of slum area in Semarang, that shown with poor infrastructures, like drainage and garbage, also high house density. Like the other slum area, Bandarharjo dweller are low income society with the earnings less than 1.000.000,- rupiahs per month, where 28 % of them working as industrial workers (Semarang Statistic Bureau, 2005). Most of the Bandarharjo societies dwell house with the right utility to wear, because the land owned by Government of Semarang. This right utility to wear legalize through the rule of Semarang Mayor in 1998, to avoiding dispute and conflict. The low income and land status that Semarang government property's made housing career characteristic in Bandarharjo differ from the other, and this characteristic that will identified. Moreover, the fact indicates that 80 % of Bandarharjo society is immigrant from other Central Java area. This immigrant moves to Bandarharjo to be close to workplace. This housing career identification can be as input to handling urban slum area problems.

2. GOAL AND METHODS

The goal of this article is to identify the housing career characteristic in urban slum area, especially in Bandarharjo, Semarang. The identification relied on perspective of house as economic goods and house as a place of dwelling process. Housing career is identified by housing movement and improvement activity based on life cycle and economic condition. In more specific, this housing career characteristic will be identified by income sub variables, job, and repairing house activity (economic variable). Other variable is life cycle consist of time of live, house and land status, amount of family, reason of cozening location and dwelling motivation.

Identification of housing career characteristic in urban slum area i was conducted by field observation and secondary data from related institution. The observation was done to directly know housing movement and improvement activity. Explorative descriptive approach was conducted to get the deeper information. Besides, to get more information use interview especially data that cannot be obtained from institution. The content of interview concerned of dwelling motivation sub variable, cozening location reason, repairing house activity and time of live. The interviews executed by directly ask to Bandarharjo society, which 32 respondents chosen.

3. THE HOUSE MEANING AND PROCESS OF LIVE

The housing definition can be seen in various perspectives. Initially, house is only seen as a place to protect from danger, physical hazard also as residence. Furthermore, house has be seen as an economic goods and a place of self actualization and activity, start from construction, development, until its settlement process (Turner, 1972:151).

Housing development as the integral part of somebody lives which increase according to resource condition also perception and its requirement. There is interaction among dweller and itself house as physical goods according to dweller life cycle. Therefore, house do not end product, but expanding process according to the life cycle, family growth, also dweller economic and social condition, where its development conducted by evolutional, sustain and incremental (Budihardjo, 1991:56). Dwelling process can be seen in physical and non physical aspect. Physical aspect is seeing from dwelling pattern, ownership aspect and footprint of previously dwelling. While the non physical aspect see at spirit form, and self actualization in their circumstance.

4. HOUSING CAREER CONCEPT

In dwelling pattern, somebody will move from a house to other to realize an ideal house according to economic social ability and its need. To get ideal house, somebody will repair or renovate their house too. This mater is called housing career. General phenomenon indicates dwelling process influenced by economic social condition also biological aspect (life cycle). The life cycle can be explained with ecological concept. This concept explain formed its niche and ghetto which inform somebody life cycle (Kuswartojo, 2005:5). Ecological concept influenced by income, amount of family, and educational level that will be explained the reason of housing location chosen. This following table explains about house requirement based on preference and life cycle.

Table 1. Housing Requirement related to The Life Cycle Step

No	The Life Cycle Step	Preference of Housing Requirement
1.	Child prenatal phase (pre child)	Low price house, rent house and located in down town
2.	Child bearing	Rent house for all family which close to urban area
3.	Child rearing	Owning new suburban house or move to urban area
4.	Child launching (having adolescent)	Owning new suburban house or move to urban area or move to higher status area
5.	Post child (having adult child)	Owning stable residence
6.	Later life (pension)	Instituted house or apartment or omit with child

Source: Short, John R, Residential Mobility, 1982: 195

Based on ecological concept, there are two housing career characteristics:

- Housing career showed by housing movement from parental house to another house. This movement conducted by people in early independence stage, or new young couple marry in Indonesia. Mostly, they move to temporary house (rent house). Theoretically, they will move to permanent house (own their self) together with increasing of economic condition. More over them will repair or renovate the house according to their preference.

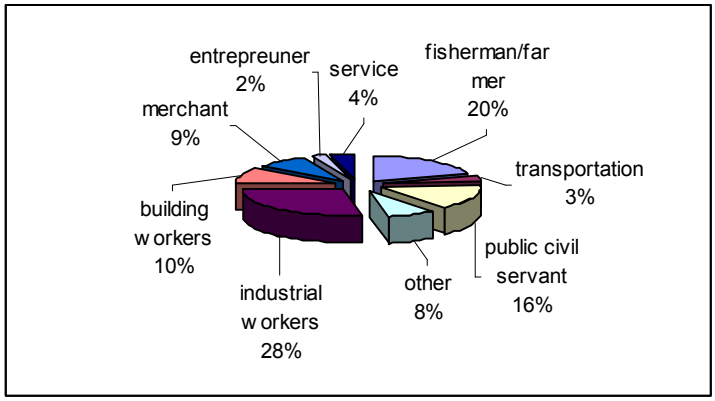
- Housing career also showed by moving to better house (ideal and comfort) according to housing perception and preference, while economic aspect do not be the dominant aspect.

Like mention previously that housing career does not only concerning housing movement, but also housing improvement. Real condition indicates that house repair – housing quality repair or housing extend – more reasonable and reachable than move to a new house.

5. BANDARHARJO: AN OVERVIEW

Bandarharjo is located in extension region of Semarang downtown, where administratively include in North Semarang sub district, broadly 342,675 ha and the wider village from 12 village. Bandarharjo as one's of urban slum area where showed by poor infrastructure and high house density. Many people live in improper house which showed by lack of light and air circulation also sultry. Flood and rob suffuse every month and it worse when rainy time. 72 % land use as built area and most of Bandarharjo society working as industrial workers (see this following figure).

Figure 1. Job distribution of society in Bandarharjo



Since 1997 till 2007 a lot of housing and environment improvement programme which held by government or nonprofits organization (NGO). There is society assistive *(paguyuban)* that help Bandarharjo society in housing improvement, but this activity desisted in 2000 because of fund limitation.

5.1 Housing Career Characteristic in Urban Slum Area – Bandarharjo

Eighty percent of Bandarharjo society are immigrant, but they mostly already omit more for than 20 years. Their life cycle positions in child launching step or post child. Their children are still omit with their parent in parental house, because of a financial limitation. Their economic condition do not support if they move to own house (temporary or permanent house). This condition mostly met at family where usually their young adult not yet owned a fix job. Therefore many house where omit of 5 till 7 person in house with broadly 60 m^2 (improper condition).

The main point is addition of family number do not make that family enlarge their house. Although they have done improvement of their houses for 1 till 2 times. This improvement is not related to addition of family number, but the building-house age reason. The finding indicates that the parental house age mostly older than children age. That's why need house improvement. This situation more complex with flood and rob hazard. Therefore mostly improvements are roof and floor repair (heightening the house to avoid flood).

But, if the children already have a fix job, they will move from parental house to temporary house. Moving to permanent house seems difficult, because more than 70 % of income just for fulfils their daily needs. Live in rent house, make them do not improve the house. This moving tends to be conducted in short/near distance, that means still in Bandarharjo area. This tendency influenced by knowledge limitation of location which far from parental house (Short, 1982:202). Its shows that this moving done at region which recognized already, so the moving more influenced by seeking procedure than the exactly leave the previously house reason (Berry, 1974:289). Flood and rob that always happen every month do not make the children move to other area where more safety and healthy.

The identification shown that short distance movement conducted by they still can remain to be close to the parent and other families, in spite of educational aspect which only basic level. This mater then make the geographical family more strong, because emotionality aspect. They also have strong defensive solidarity as immigrant, so the housing movement tends in short distance.

The other factor that causes short distance movement is job reason. Mostly the children have the same job with their parent as an industrial worker. Therefore the housing movement remains in Bandarharjo area so that nearer with workplace.

As industrial workers their income relatively small (less than 1.000.000,- rupiahs per month). This condition made the new young couple marry relatively difficult to move to temporary or permanent house. Even there are live in permanent house, mostly its parent heritage house. Their

parent prefer to endowed their house to its child because if the house will be sold relatively difficult, considering land status which only right utility to wear while the owner is government. Besides, the land economic value (sale value) in Bandarharjo unprofitable because of many environment problems (always suffused flood and rob). So, they prefer to endow the house than to sale. Therefore their children do not need look for the new house. Usually the parents will live in that house too. Furthermore, the children who live in its parent heritage house improve the house according their need. This improvement conducted step by step according to their ability and this mater felt cheaper than buy a new house.

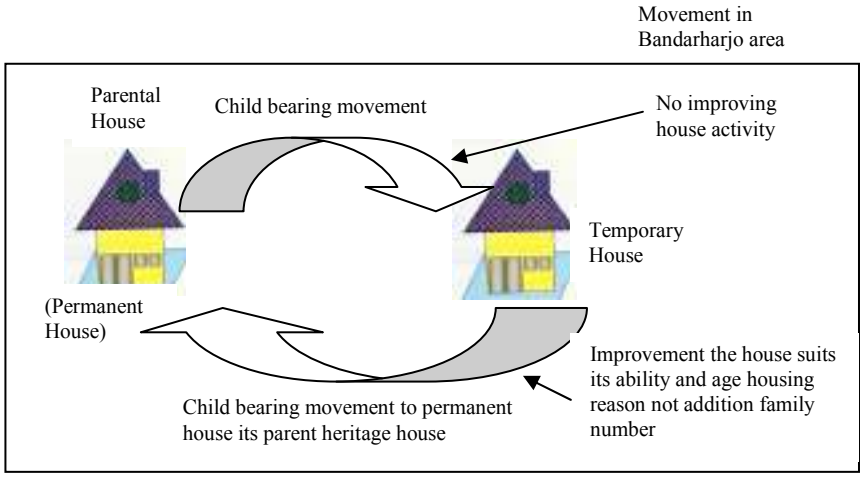


Figure 2. Housing Career Characteristic showed by
Movement and Improvement Activity that still in Bandarharjo Area

On the other hand, societies with income more than 2.500.000 rupiahs per month prefer to build the house outside Bandarharjo area. This house made as investment (by rented), where result obtained will be bigger than investment by built house in Bandarharjo. This matter because housing rent value higher than in Bandarharjo. They still settle in Bandarharjo although from economic aspect they able to move. This situation influenced by dwelling motivation, which investment reason dominant than house perception. To avoid flood and rob they will improve the house but insignificant. This housing career characteristic met at ship owner, entrepreneur of smoke fish and *jok* (leather entrepreneur). Equally, they live in Bandarharjo to yielding money; therefore do not think about house quality condition.

Besides for rented, society with income more than 2.500.000,- rupiahs per month build new house outside Bandarharjo area for its children. These matter because they do not want the children live in slum areas that perhaps

have high economic and social risks. It worse with Bandarharjo image as unsaved area because to number of criminal occurrence. Therefore the parents want the children live in better environment.

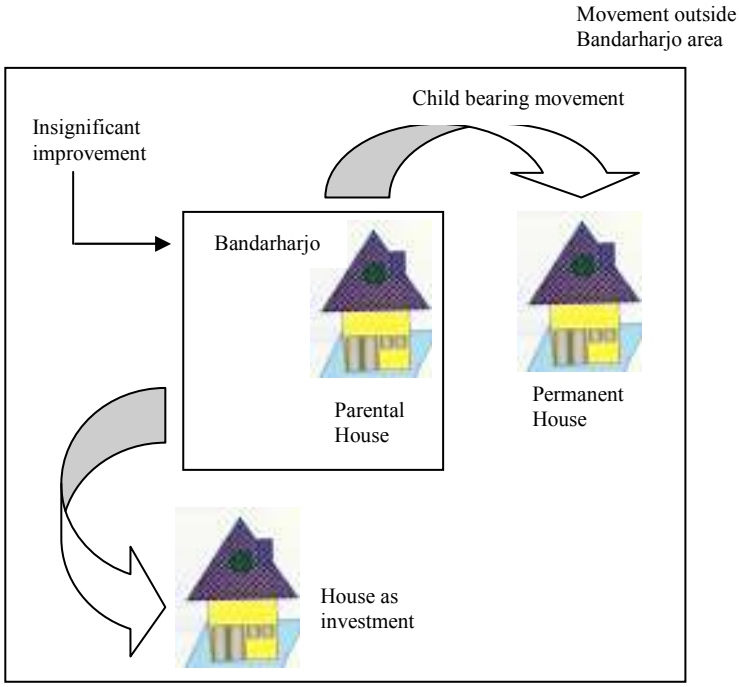


Figure 3. Housing Career Characteristic showed by Movement and Improvement Activity outside Bandarharjo Area

6. CONCLUSION

Housing career characteristic in urban slum area Bandarharjo, Semarang do not entirety influenced by income. But there are another aspect, like defensive solidarity, environmental perception, preference and land status in housing career is not totally make the child bearing move from parental house to temporary house than to permanent house. The other finding is addition of family number does not automatically make the parent enlarge the house.

Bandarharjo society's movement and improvement activity show they always adapted with the condition and environment. Its also prove a sustainable process. This housing career characteristic identification is one's input to determine the best solution of urban slum upgrading.

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1 - 3

Re-housing Slum Dwellers: A Conceptional Approach of Homes

Gusti Ayu Made Suartika

ABSTRACT

The United Nation Human Settlement Programme in its 2007's report assures that as long as rapid urbanization, high urban poverty, inequality and wide income discrepancy, insecure tenure, and globalization continue to show no sign of pausing, slums will remain part of the world's urban living condition. A forecasted statistical figure of world population shows a record of two billion people will be living in slummed areas in 2030 (www.forbes.com/2007/06/11, accessed 20/01/2009). This data further indicates, this group of a slightly below 25 % of 8.1 billion populations residing in urban areas in the same year, will show deprivation of at least three among United Nation's five identified living conditions attached to a slum. These include inadequate access to safe water, sanitation and other infrastructure; poor quality of housing; overcrowding; and insecure residential status (UN-Habitat 2007). While current attempts, both at the international and national level, yet place greater focus on developing an immediate strategies and schemes to alleviate and redevelop slum, this paper moves a step forward complimenting the aforementioned endeavours. It thoroughly investigates intrinsic meanings associated to a *home*, an equally fundamental element to both slummed and non-slummed settlements. An insight to these associated and sometime hidden qualities is substantial before efforts to develop a strategic framework in re-housing slum dwellers are commenced. Such an understanding will ultimately enable policy makers and partners to propose not only technical solutions – to eliminate slum –, but sound and socially sustainable approaches in doing so. A further expectation would be for the anticipated schemes resulted from such a procedure to harvest support in their implementations, rather than rejection from the very community (slums) the schemes are dedicated to at the first place.

Keywords: slum; re-house; home; symbolic meanings

"Home! Sweet home.
Mid pleasures and palaces though we may roam.
Be it ever so humble, there's no place like home"
*(*Quoted from an old but famous song:
Home Sweet Home by Henry Bishop and John Howard Payne)

1. INTRODUCTION

The above quotation expresses an immense gratification homes have to offer. It imparts every reason to long for, to always go back to, and to relish its presence in life. These heartfelt attribute are not necessarily due to mere physical qualities a home has, but deeper qualities associating with numerous contexts, such as, closeness within family members, social circumstances and relationships, lifestyles, beliefs, time, environmental challenges, provision of natural resources, etc. From place to place, these constitute similarities as well as dissimilarities, which subsequently characterize a home being a representation of people who live in it, its time, and its neighbourhood environment. Through time, a series collection of family events, celebrations, incidents often develop into irreplaceable memories, and subsequently enrich unique meanings and qualities correlated to a family home. Taking these circumstances as a contextual background to its discussion, this paper explores in a greater depth, intrinsic significances pertained to homes across different group of societies. While it definitely appends the role of home being a place for refuge, it further discusses inherent functions, which on one hand may not be the case to homes in certain social group, but well imbedded by others on the other.

In line with the current attempts in slum redevelopment, this paper propounds a fundamental understanding of a home, an equally primary element to both slummed and non-slummed settlements. An insight to homes' associated and sometime hidden qualities is substantial before efforts to develop a strategic framework in re-housing slum dwellers are commenced. Such an understanding will ultimately enable policy makers and partners to propose not only technical solutions – to eliminate slum –, but sound and socially sustainable approaches. A subsequent expectation would be for the anticipated schemes resulted from this procedure to harvest public support and participation in their implementations, rather than rejection from the very community (slums) the schemes are dedicated to at the first place.

While current attempts, both at the international and national level, yet place greater focus on developing immediate strategies in slum alleviation and then re-housing, this paper moves a step forward complimenting the aforementioned endeavours. This paper argues that while home in general denotes protection from harsh natural conditions and various form of threats, an understanding as to how this function is accommodated along with other home associated uses, values, and meanings should be equally counted if

the success is within the prime agenda. It further highlights that each slum is as unique as is the case of a non-slummed neighbourhood. Slum revitalization related efforts cannot be either standardized or broken down into mere technical details, equally implemented throughout cases, but is a simultaneous process, grounded by a thorough understanding on what constitutes homes. When this pace is absent, failure would be an inevitable end.

2. SLUM AND URBAN POVERTY

A comprehensive knowledge on the above issue is in a greater need than ever. As cities continue to grow, complexity of problems associated with urban life are also racing. It challenges urban development, in both developed and more to the developing countries. In comparison between the two, the latter group are likely unwell equipped with proper planning systems, hence tends to suffer worse due to the impacts of the increasing rate of urbanization, widening income discrepancy, insecure tenure, and invading consequences of the globalisation. The United Nation Human Settlement Programme in its 2007's states these are the three main grounds for slums creation. The Report further emphasizes that urban poverty and slums will remain part of the world's urban living condition if there is no serious endeavour to first slow down rural to city migration; second, to bridge gap between the rich and the poor; and third, to decelerate the impact of globalization.

It is forecasted that in 2030 cities around the globe will be inhabited by 8.1 billion people (www.forbes.com/2007/06/11, accessed 20/01/2009). Almost 25 percent of these urban inhabitants will live in slums. Many of them will be deprive of at least three among five living conditions characterizing a slum, as are identified by the United Nation. These include inadequate access to safe water, sanitation and other infrastructure; poor quality of housing; overcrowding; and insecure residential status (UN-Habitat 2007).

This statistical data is further alarming by an inevitable and uncontrolled flow of people from rural to urban areas. Poor living condition of the rural life and lucrative image sparkling from the urban areas have been claimed prime motivations for such a condition. Villagers migrate in search for economic opportunities. Some may succeed in their effort, most however are unlucky to have the chance to reach their dreams. To make matters worse, the latter group is usually those of having no proper education and inadequate skills, major drawbacks from participating in the recent globally competed work force. This often makes living in a highly competitive urban style hard, if not impossible to deal with. This situation leads to insecure low paid works, providing modest access to financial resources that leaves this unfortunate group with no choice, but to live (often) on illegal land – squatters –, and poor neighbourhoods – slums, a could be worse living environment than that left behind.

To many big cities in developing countries, such as Nairobi, Karachi, Mumbai and even Jakarta, slum alleviation program involves high costs that can be a serious burden to national budgets. The process is also tedious and complex to handle. A very command alternative solution, the government and its associated agencies come out with is to re-locate and re-house slum dwellers. While the urgency of such an action may be genuinely initiated, it can also be driven by a lucrative development proposal that requires the site where the slum is located. The latter action is acted in order to either serve public's needs, revenues generation, or provide extra financial incentives to particular government officers involved in the process. Reason to alleviate slum can be therefore as complex as concerning problems the slum area faces itself.

Whichever the case is, this paper is a follow up the commonly proposed solution to re-house slum dwellers in order to improve the quality of urban living environment. It however addresses the question as to how this idea is to be realised. As has been frequently stated earlier, as a home is a fundamental element of the re-housing program, an understanding of home is substantial. The following case is a true reflection of this statement.

We may observe the case of redevelopment scheme proposed by Mumbai's government in India, and its associated partner in their attempt to revitalize Dharavi slum. National Geographic Channel Asia in its program: Megacities:Mumbai, is quoted as saying that almost 60% of this city's population live in slums. While Dharavi was once recorded the world's largest slum before superseded by Orangi Town in Karachi (Pakistan), people who live in this chaotic settlement prefer to stay where they are. Government proposed plan to re-house them in a newly developed settlement has gained a wide public refusal. Assuming this designed neighbourhood will provide the Dharavians dwellers with a 'better' living quality, one may wonder why a rejection is the case. It is claimed, the plan fails to accommodate dwellers' lifestyles. The Dharavian people have for years lived in a very crowded living environment with all kind of activities that not only give them identities but also means for living. They relate to neighbours in certain ways, and run various home industries and businesses. The Dharavians dwellers could not see these behavioural patterns imbedded within the proposed scheme. Besides the concerns of the teeny scale living space provided to each family, the Dharavians people are in deep doubt of the continuity of their laundry, garbage collection related businesses, which are the main source of incomes to most.

This case emphasizes that admittedly homes in a slum settlement may be of an obvious representation of urban poverties, visibly observed through demonstration of its low physical qualities, the absence of basic infrastructures, and pertaining supporting elements. In consequence, this circumstance is viewed degrading, responsible for negatively contributing to the urban image. Urban planning strategies therefore incline to approach the matter as a mere part of impoverished residential alleviation program, by developing a considered newly un-impoverished housing complexes. Such

approaches are often embedded in an overall scheme detailed by assigned government/urban planning agency at a national level, imposed on every slum encountered throughout the national boundary. This may be an answer at one layer, but a fundamental concern on the accommodation of people's lifestyle, behaviour, social relationship, history into newly developed housing is often considered the last and least if not completely overlooked. The Dharavian case has demonstrated this situation.

A home possesses functions and meanings, which may or may not be universally shared with those of other slummed neighbourhoods. It embraces symbolic values, which go far beyond an apparent function being a mere space for refuge. For these qualities, a home is therefore unique, treated with dignity, deference, and respect. Thus, this kind of understanding is substantial to every attempted endeavour, before decision to re-housing slum dwellers is to be made at all levels. The following section elucidates various distinctive functions, values, and meanings carried by a home across the globe

3. HOME AND ASSOCIATED QUALITIES

> "Home is the ultimate paradox: it can be a building, a destination, or a concept. Home at its most elementary is merely a house – a place where we perform functional tasks for ourselves such as washing, cooking and eating, personal hygiene, storing material possessions, investing money, and other activities. But home has purposes beyond the material; it has an historical and spiritual purpose. We say: "Home is where the heart is" – a thought, which opens up a universe of emotion. Here we use the idea of home to signify the place where journeys end; a place we somehow arrive back to, though not necessarily from where we departed from. Despite this, home also connotes the idea of a return – a homecoming of some kind to the same people, whether it is to where a partner resides, to one's children or friends, or to a familiar landscape. Here the connection in our minds moves beyond the functional into the realm of feelings" (Cuthbert 2006, p: 1.)

The above quote illuminates an understanding of home that can be a structure, a place, or even an idea. To the common knowledge however, a home is well perceived in connection to a *house*. The quote stresses universal activities and roles a house accommodate, as well as possible immaterial connotations and uses. The quote brings our understanding of home to a broader level than that of seeing it as simply a place that have a capacity for visible purposes. To this context, this paper classified home into nine different categories, which are explained in detail below.

First, house in relation to nature. This classification implies a fundamental meaning of a house as a "refuge" or "sanctuary." This is a method to express the meaning of home in connection to the natural world.

Refuge implies a passive attitude and experience: some place to which one can escape, or flee from enemies; a place of security or asylum; a sanctuary or a place where people go for safekeeping. There we can avoid the fear associated with natural forces such as earthquakes, tsunamis or other extreme climatic changes. In this context home reflects attitudes to nature, and as a refuge, is designed to mitigate its worst effects. There is also a significant overlap between humanity's relationship to other peoples and animals, and its attitude to the natural world. While both are extremely material considerations, relationships to nature are also philosophical, religious and spiritual.

Nature on one hand can inflict threats to human existence, it also has been a great inspiration as to how houses have been conceived, designed, and constructed. Variation in climatic and topographic conditions, geographical position, provision of natural building materials, have created ranges of housing design. Examples of this can be observed from Japanese style houses (and garden), stilt house, igloo, mud houses in Africa and Capodoccio Region, cycladic houses, Inca masonry, cave dwellings, and various organic based design in modern architecture periode, such as those by Frank Lloyd Wright.

Figure 1. Rock-Hewn Dwellings, Uchisar, Turkey, Cappadocia Region.

Second, a house in relation to defence. The concept of house as defense looks at house as a safeguard from harms brought by living things, including other human beings. This concept is primal and remains with us today. Home as defense is also dictated by climate, geography and nature. This view has been discussed in house in relation to nature. Many forms of house have been a representation of efforts to defend the dwellers (or part of them) from outside living forces considered harmful or undesirable. Let say from the hunter gather society we acknowledge that fears of being attacked have encouraged people to locate their houses on the area outreached by harmful living creatures considered either harmful or inflicting undesired effect.

Historical development of human dwelling also demonstrates that well-fenced houses are very common (Oliver 1975). Besides the presence of guards, most of existing palaces are surrounded by high gates claimed necessary for safety reason. The Inca (Peru) located their thatched huts on a 2800 m above sea level site in the sacred-Peruvian Andes, in order to protect their settlement from Spanish invasion in 1532. A hilltop location is also a favored location. It offers safety as well as a threatening impact to

potential enemy as it elevates the whole settlement. This is true to the case of the San Gimignamo settlement, Tuscany, Italy. The location of Cliff dwellings of the Mesa Verde National Park, Colorado is another prime representation of settlement for defence. It is located under an overhang in proximity to the top of a canyon wall. Looking at defence from a different angle, a house in a Moslem society is designed to protect female members of the society not to be seen by outsiders (Michell 2003). Houses are designed with terraces and balconies in ways that allow women to see events occurring outside their houses, but invisible to outsiders.

Figure 2. *Cliff Dwelling of the Mese Verde*

Figure 3. Buckingham Palace

Third, a house in relation to cloister. The word "cloister" has a variety of possible connotations. On one occasion, it immediately conjures up the idea of courtyard and the geometry of the square. On different occasion it implies something hidden, secretive, protected, internal, and private. In formal terms, the cloister or courtyard represents the square at the domestic level, but there is also a direct analogy with the square at the city level. The 'pempatan agung' pattern (intersection), one of Balinese urban design principle dedicates a special site for public square at one corner of the intersection. This continues into practice at the household level. Traditional houses in the Balinese mainland area are designed with courtyard as their orientation. The role of courtyard is profound in this society, either for social or ritual purpose, even up to the resent time. Courtyard is also a prominent to siheyuan (hutong), Chinese traditional houses. Unlike the case of the Bali people, Chinese people have long left traditional type of dwellings opting for flat in a high-rise apartment

Figure 4. Alhambra Palace, Spain

Figure 5. Stoa of Attalos, Athens, Greece

A great example of the old type houses famous for its Lion Square is the Alhambra Palace, Spain. The square has a lion fountain constructed on top of twelve marble lions. It connects three rooms all together: hall of the Two Sisters; the Hall of the Abencerrajes; and the Hall of the Kings. The existence of cloister is not isolated to houses. Many great building of the past accommodate courtyard within. The St. Peter Square in Rome, the Stoa of Attalos (Athens, Greece), and many universities orientate their activities into courtyards.

Fourth, a house in relation to beliefs. In this category the existence of home concerns with the connection between humanity and the invisible world in its many resemblances. The function of home under this classification encompasses everything from organized religion and animistic beliefs, to the worlds of black magic or voodoo. Home as representation of beliefs focuses on safeguarding occupants from unseen forces, the manifestation of gods, and ceremonies in their worship or offerings to appease them. Overall, these practices seek to maintain equilibrium within the home, where health, wealth and happiness are commonly held aspirations. Also important is the position of home as a place where family beliefs are nourished. This notion incorporates believing in some kind of god in the form of organized religion, existence after death, particular ideologies and practices in life, as well as the power accorded to individuals within society such as those of seer, jro taksu, shaman, witchdoctor, medicine man or priest.

Figure 6. Courtyard in Balinese Houses

Figure 7. Family Shrine in Balinese Houses

In some societies, houses have specific space for various worships, either those dedicate to ancestors, God, or even idolized person, such as national heroes, movie stars or world famous singers. The Thai people usually have a space in the house where they can put a picture of their King. To some extents, house as a place to worship involves offering and its preparation, which may also require a specific room for related activities. All of these are reflected in distinctive division of space as well as how each is presented concurrently with other manifesting spatial roles the house has. Again, houses in Thailand preserve space for a statue of Buddha. This space can be a tiny part of the wall inside the house to hang Christ's symbolic cross for those who believe in Christianity. To Moslem families, they will have a common room enough to accommodate family pray, five times daily. The Balinese people also have specific zone in their traditional dwellings in which family shrine is located. For this purpose, the house is valued with respect, protected with certain degree of holiness.

Fifth, a house in relation to journey. From the early stage of our social development of nomadic lifestyle has been part f it (Blainey 1983). To this, a house is where the journey reaches to an end, or where a rest and refuge was required and necessary. It followed where people movement is heading for various reasons. If fact, the house as journey has had a long history, from the trading caravans of the Great Silk Route to the space capsules that NASA has sent to the moon. While the nomad is central to our idea of home as an experience of movement, the concept also has many variations.

The Bambendjelle tribe, Makao, Democratic Republic of Congo do traveling in search for food (Rudofsky 1964). The Australian Aborigines people maintain a nomadic lifestyle guided by their 'dream time.' They build temporary shelter whenever necessary; they sleep roofed by the sky otherwise. The Bedouin (Morocco) 'the inhabitants of the dessert' keep their journey through the dessert accompanied by their tents. The Native Americans, Great Plains, United States of America travel with their tepee.

This is a distinctive type of tents constructed by ten poles, covered by animal skins, with hole on top to allow fire cooking and smoke circulation.

Figure 8. Native Americans Teppee, United States of America

Thus, the house for journey leaves footprints on the earth as its dwellers do. This related association of home has not stopped by the current global era, but it is still in practice by some communities.

Sixth, a house in relation to art. Throughout history, home for people in every single geographical, topographic, and climatic condition has always had symbolic manifestations. The reason for this is obvious. People live not only in the material world of their own physical requirements, but also in environments where societies express their collective history, beliefs, aspirations, emotions, the exhibition of power and authority, and even fears and tribulations. Through various social development stages, human kinds often express these immaterial aspects of life through arts (Rykwert 1982). Paintings, sculptures, potteries, carvings are all part of the products resulted out of expression of feelings, creativity, and talents. As house is central to human existence on earth, it can be seen as a product of creative attempts of a designing, decorating, and finishing process, necessary in order to construct home, which is beautiful, artistic, and a pleasant place to live in. On different occasion, a house can also be a home to all kind of art forms that subsequently enhance its artistic values. This is not necessarily to say the presence of beauty is a monopoly to wealthy dwellings only. It exists at every level of society, in its various forms and manifestations, and definitely comes with appreciation indeed.

Seventh, a house in relation to façade. Façade can have various meanings (Katz 1994, Eisenman 1999). It derives from French language which mean “front.” It however also implies different meaning of “false” or

"illusory." Façade to the context of home is used to describe the front of a house, usually facing the street. The idea of something "false" also applies to houses, since a facade usually does not contain much information on things happening inside. The facade is one surface of the house that can be seen from the street the street. This also raises an interesting conundrum for architects, namely whether or not facades come into the realm of what we call "architecture" since only one surface is usually designed, and it is normally part of a continuous frontage stretching the entire length of a street.

Figure 9. Balinese Façade

Figure 10. Façade of a Hutong in Beijing

Some societies consider it important to have a well-represented front side houses: an enriching element to the neighborhood, not only to those who live in, but also to the surrounding environments (Cardwell 1971, Marcus 1993, Kiang 1999). To a slum area, a façade may exist in a different physical quality compared to that of a non-slummed residences. Many native Balinese settlements, such as those of the Pengelipuran and Tenganan village forms a unique façade representing lines of front-side houses that are organized in accordance to linier pattern. On the other hand, hutong in Beijing, China, which is a pathway formed by lines of traditional residences (shiheyuan) shows a line of the back walls of actual courtyard houses within.

Eighth, a house in relation to function. This classification relates home to its true uses. It values expression of function, and considers either additional or decorative elements less or unnecessary at all. This comes in line with modernist architectural movement of the 20th century, in which Mies van der Rohe was famously quoted as saying 'less is more" (Boissiere 1988, Cooper- Marcus 1995, Saito 2003). As we have seen, home has a diversity of functions. In different places and at different times, home has protected humans from nature, other people, gods, and evil spirits. It is a place for celebration and decoration, and a sanctuary for religious observance. At another level, home provides a place to work; make love; sleep or rest; to cook; to provide privacy, warmth or coolness; and perhaps somewhere to take care of washing and personal hygiene. In all of these cases, however,

there are a plethora of ways in which these functions can be both performed and expressed. If we look at the astonishing variety of homes, we cannot even make general assumptions about how these various functions are incorporated, except perhaps in the developed world of today. Even there, huge cultural differences predominate.

Figure 11. Japanese House

The history of humans social development demonstrates, how functionality is reflected within the culture of living. The Aboriginese people of Australia build their houses with available resources nature provided them with to accommodate their dream-leaded movements through the Australian continent. Japanese traditional houses for instance, besides their strong connection to nature, have been long considered very functional, inspiring the emergence of minimalist style in residential design (Isozaki 1983, Jencks 1987, Yutaka 2002).

Ninenth, a house in relation to industry. By now, we all come to the terms that the existence of houses is intertwined with human survival. It is an inherent component of our physical, social and psychological well-beings on earth (Stewart 1970). At the same time, this circumstance is inseparable from the attempt to create and maintain continual means for living, which, to the current development, is correlated wealth creation. To this extent, a house has been for long positioned to support the production of wealth in numerous societies. The emergence of home industries is an obvious reflection of the idea. Shop houses exist in many China towns around the world design to combine home and economic activities. The ground floor is usually catered for all kind of trade related businesses, and the upper levels are for home. The case is demonstrated by the city of Penang, Georgetown, Malaysia whose a great collection of conserved shop houses from its past development is thrived (Dal Co and Foster 1998).

To many households in the developing countries, housewives have major roles in extending home's function into basis for various economic attempts. In Indonesia for instance, many home based food productions and catering industries are very common. This is possible as food handling and preparation is not yet industrialised into form of state regulation, in which most home based food production practices are likely to be outlawed. Looking back to the case of Dharavian slum in Mumbai, homes are even turned into the central basis for household incomes. Laundry services, garbage collection and recycling related activities, and pawn centre are among additional functions homes accommodates in this slum. This case is

not isolated to Dharavi slum, but a common practice to many slummed settlements, especially those situated in cities of the developing countries.

Figure 12. Shop Houses in Penang, Malaysia

4. CONCLUSION

Discussions within this paper have demonstrated the complex values and functions a home could be associated with. They are universal souls of home exist in many different communities. While this paper has underlined the importance of all these associated values, it has also highlighted that each is not equally represented. One may be given more emphasis, but considered less (or not at all) important within certain houses of particular societies. At the same time, one value may be imbedded to its maximum presentation, while others are not, in which subsequently implies that their manifestations cannot be observed.

Differences in geographical position, climatic condition, available resources, stages of social development, and social interactions, are all contributing factors to the emergence of diverse residential related values, meanings, and practices. This circumstance has indeed enriched and constituted uniqueness to homes across the globe, both to those situated in slummed or non-slummed settlements. Lining its focus with slum revitalization efforts, this paper draws attention to pivotal requirement in comprehending key values, homes in a targeted slum observe. This is a fundamental step before slum alleviation schemes to be appropriately proposed: ones that fulfil homes' physical qualities as well as prolong their souls (Patterson and Jones 1991, Fiedler and Feierabend 1999, Oshima and Kinoshita 2000). More importantly, this paper emphasizes that when comes to their implementations, the proposed schemes will gain necessary

supports, not only by assigned government agencies, but by households to whom they are dedicated to at the first place.

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1 - 4

Policy and Social Economic Aspects for Slum Upgrading in Urban Area
Case Study: Surabaya

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ABSTRACT

Surabaya as the second biggest metropolitan city in Indonesia is said to be represented as economic growth center and also become the strong fascination for residents in buffer zone (hinterland), especially the countryside area outside the city. They come to Surabaya because the place provides a lot of choices to obtain various opportunities in the effort to improve their life. They come to Surabaya on various motives, though economical motives is the most dominant element. In line with such condition, Surabaya, has emerged plural societies. Some of them are segmented on the basis of living legally or illegally in the slums area. In urban area, citizens are at least fulfilled by the minimum requirement of housing facility and their settlement. The problem for the those having low incomes, is inability to disregard off hand house requirement. The problem is so important that they are not able to release the priority expense for development and conservacy of their house and their settlement environment in order to be dwelt adequately. Smaller the part of income which can be put aside to utilize the defrayal of conservancy of house and settlement facility, hence the dirt progressively raised its condition. The mentioned situation has come to the universal social phenomenon. The existence society represent the social reality which cannot be eliminated, as long as resident of buffer zone of Surabaya above the ground marginal in a condition or have been experienced by the imbalance process in social economic life. Rapid peripatetic investment developments have been underwent in Surabaya so that they have widened the imbalance with the condition of social economic in countryside area. Therefore the lameness has been generated the migration process , such as resident having no social economic class.

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This article tries to give the description from law, social and economic point of view about the position from slums communities in Surabaya. Data are obtained from various literature and field survey inslums area of Surabaya. The finding gathered goes together with the legal aspect of administration population, as well as social economics condition of slums communities. It is clearly elaborated that the population administration, life alienation, low accessibility cause the economic lameness. All those factors and their related/relevant give the share to weaken the society .By such description, it s expected that this is able to develop the knowledge of the slums condition from regulation aspect and economic social point of views. The overall is obtained the study and knowledge expected to yield the integrated policy and humanist action which is continually developed and made the " City Wihout Slum " possible.

Keywords: legal- social economic aspect, integrated policy, sustainability.

1. INTRODUCTION

Towns in Indonesia experience excessive urbanization. Unfortunately, many of them are not able to provide the fundamental facility such as adequate job opportunities to most incoming external residents who have migrated to town. This matter makes high density of the town becomes crowded and decreased empty farm affecting generation of slums. With more and more its settlement ilegal, governmental of town becoming not able to give the adequate facility also. Effect of existence of urbanization, emerge various social problem like incidence of slums, downhill of it area earnings, less awake of environmental aspect, low education, and also incidence of social conflict usher the society. Slums that happened give the negative influence both for its dweller and also environmental around.

2. PROBLEMS

In the year 2001 (Adiseno;2003) World Bank and PBB released the program which they mention the City Without Slum .Finance globalization emit a stream of to pass this program. Tens of million dollar flows to nations expand to pass the debt scheme, soft loan and some of fund. " City Without slum" coping to reply the problem urban besieged by slum. In harmony with governmental ambition for beautiful town, a town dream will without ugly sanitasi, scrapheap, and wild shack. But the ambition translated by all town governor by condemn ruthlessly slum community. Governmental is at all disregard the fact of concerning the slum appearance cause. Hence *kampoong* even also turn into the hotel, commercial sentra, white colars and apartment. Partly remained nowadays still inhabit the disputed site,

unemployed and do not have sir. Non-stop to be gone to the wall, impecunious community stand up in side of river, marshland, in gallery of mine overpass. Impecunious community of town even is progressively dissipated when gallery of mine toll cleaned and threat condemnation closer to those who live in the flood plain of river. Latter World Bank by self confess slum as product from unsuccessful policy, ugly governance, corruption, inappropriate regulation, farm marketing which is disfunctioning, financial system which is not responsive, and an elementary matter concerning no political willingness (political will). Each this failure add the charges for one who previously have very encumbered by poorness and pursue the big opportunity for the development of human being in activity of town life.

Urban problems in metropolis in Indonesia generally owning cycle which remain to. Started from accelerating urbanization replied with the clearance operation, informal razia sector, impoverished condemnation clan of town, continueing with the last floods disaster , disease epidemic, public problem and garbage's service is continuously happened in an vicious circle. Governmental of town have to change the paradigm and start to listen, discussing, and accommodating smart idea from community. In a few case condemnation, community refuse the condemnation force by offer the idea, concept and even come up with the rational quantification lessening burden ,governmental and much more beneficial government public society and community because importance of larger ones is not sacrificed by some of people of capital owner, contractor, and unrighteous which during the time master to access and resource. Omit the town power will side where? This article try to see the slums context from legal aspect evaluation, cultural-social and economics. The description obtained to be expected will assist to add the discourse strive the understanding to slums phenomenon. It gives the assessment which proporsional to slums existence as one of metropolis phenomenon.

3. DISCUSSION

3.1 Slums

The Office of Minister of People Housing (Agusyantoi;1990) have opened the slums criterion when its environment is not regular, do not enough basic facilities , land is narrow ,high density ,low in quality of construction material, quality structure and its use wildly. While Silas in Kampong Surabaya to the Metropolitan characteristic of slums are: **(a)** if/when standard going into effect below/under minimum, **(b)** life in settlement menace the safety of dweller, **(c)** if/when house as saving capital as long as somebody life each every annihilate threatened time or vanish, either due natural disaster and also by human being. While Eko Budiharjo (1998) giving about understanding about marginalized urban cover three component which can

be grouped in sector informal,: **(1)** Peripheral Settlement, covering slums and kampong inclusive of slums and squatters of where dirty congeniality interpreted by as dirty and untidy and was contained, **(2)** marginal model of transportation, that is type of transportation public which usually used by a marginal resident like *becak ojek* and bicycle**, (3)** marginal economic activity, representing productive economic activity or fundamental living of marginal resident which often referred as economic under ground include cover the small home industry, sales by on foot, sale food by *rombong* around the area etc.

3.2 Aspect of Cultural Social and Legality of Slums Society in Surabaya

Growth of Surabaya in course of interaction from component of resident circumstance, technological, environment and urban organization have borne the " ecological urban complex" (Kingsey;1965). In line with such condition hence in Surabaya, as does other metropolitan town, emerge the pluralism society. Some of society segment which the plural resident which live in the dirty countrified area. The mentioned have come to the universal social phenomenon, its meaning have been happened in a lot of state. The slums society existence represent the social reality which cannot be eliminated, as long as resident of buffer zone of Surabaya above the ground marginal in a condition or have been happened by the process in social economic life. Fast peripatetic invested development has been happened in Surabaya so that they have been widened the Lameness ravine with the condition of social economic of countryside area. Therefore the Lameness have generated the migration process, for example resident non-permanent in social economic under low strata.

At the level of relation of Surabaya with the town around Surabaya, there are bearing process which less be harmonious among Surabaya with the area hinterland have taken place long time. Life of all migrant fulfilling slums in Surabaya have been shown by lowering her quality of education of migrant non-permanent and generally they work as labor and some of other dissimilar trying at informal sector. As long as work in informal sector and also cheap labor and also there (be) still demand in society Surabaya and assessed economical profit, hence their existence will be immanent. Their choice become pedi cab worker, *trash collector*, clothes seller of is ex-, cheap food hawker, becoming labor, becoming house slave, is rational work type choice and become the target remember the economic ability storey level and mount the education those who very low generally. Their economics activity tend to make a move in informal sector. Condition supply-demand like that constitute the society existence which live in the slums, though they legally have to follow the invitation going into effect and values which grow the vinicity society. Slums economics tend to oppositely also

have come to the part of sub of system of town economics, in this case Surabaya.

Clear description of informal sector economics phenomenon wrestled by the slums society, hence we can describe the understanding of this marginal society legality aspect. If formal sector interpreted by economic activity conducted to have base of at authentication punish formally, and in consequence hence informal sector is economic activity conducted without have base its authentication judicially, that is formal law authenticating kinds of activity and capital and also asset owned, level of lease to be paid to government. Affect from authentication judicially is social authentication, where status punish a economic activity yield the valid social status. Fight against from formal is informal economic activity. Parsudi Suparlan (1995) seeing it is true that like that's most dirty settlement dweller living or those who is pertained by to have a low production. That is do the economic activity which is kinds of activity that conducted by without existence of formal authentication judicially, in consequence also kinds of their living or work is pertained by as outside law, both for agreed by according to law and also which do not. In consequence also hence access the them to get the aid from economic habit and finance formally become difficult, its law guarantee cause there no. Informal problems and accessibility sometime not merely that them haven't accessed, but oftentimes also they not ready to to use or wrong use the facility provided by government through habitual. Fault of legality aspect also look[at slums society n with the tendency do]not own the KTP (Card of Resident Sign) as evidence of administration migran where generally on the basis of governmental ownership KTP (Surabaya) have made the policy with giving priority in obtaining or exploiting aid, public facility and subsidize.

Society existence in slums taking possession of governmental property farm or public property, can be categorized by as dwelling illegal or referred by inveterate dwelling . This matter is clear have generated the conflict of [between dweller with the institution in charge of for farm taken possession of. Though they omit at slums, but they also form the institute of Neighbor Foundation (RT) and Citizens Foundation (RW), even some of them can enjoy the electrics lighting, there is also owner phone the house. They have also participated active in social activity . Such condition, clear will complicate for Pemkot Surabaya and also farm owner to free the settlement way.

Migrant in Surabaya which live in the slums, though have given the negative contribution to environmental condition of town of because have created the slums with all its implication, but in fact they also give the positive contribution for town development. Surabaya have obtained the allocation of energy human being from countryside area. The energy of human being of countryside origin even its quality is lowering, but they have

come to the part of ecosystem urban which directly render the cheap labour service, and provide the production of domestic scale, especially very needed by for formal effort and also middle faction society to for, goodness as labor and also as part of market segment, even as distributor of manufacturer commodity. Slums existence which can provide the cheap housing, also very assistive town wishing it for example labor of factory or low faction area officer needing rental room and or contract matter which relatively cheap. this is a phenomenon like that, requires to be arranged to establish the understanding that slums bother the beauty of town, injuring image and even town self regard

3.3 Governmental Policy of Surabaya

Urban conflict is obliged to be faced together, is not finished in secrecy unilaterally, nor to be avoided[by caused by feeling miris or sneaking. Solving of good conflict and opened, representing forerunner of adulthood and maturity of a town. Dictated all planning from outside and from the top without your excellence of under society, big of possibility will generate the new disease in the future. Mushroom of it dirty sack with the its problems warehouse is manifestation of clinic from not work the functional element from system organ of town body. Appearance wild settlement and settlement which improper dwell in fact represent the weakness management in managing town planology.

Prof. Dr. Eko Budiharjo in its book Town With vision of Environment says that the town image truthfully is do not simply formed by a skyscraper monument which arogan in the middle of town, but also nuance move the, mannerism and activity of human being of both for capitalistic and modern in formal sector and also traditional and informal sector people. The telling of town fascination exactly sometime shine from background of activity of ala bazaar, all is not anticipated and difficult guessed by but full of meaning. Here in after told by Eko Budihardjo and Djoko Sujarto (1999), in the year 2000 for the first time in half history from earthling population live in urban area. In the year 2015 coming estimated by here are 27 town populating more than 10 million soul, 22 town among other things reside in the developing countries. A town develop and developed by regardless of method have continuation and with vision of environment hence the town will face various environment problem which finally harm the citizen of the town dweller society. The town will face the problem of floods and crisis irrigate the, contamination (air, irrigate and ground), environmental settlement health and, transportation and roadway, extravagance energi etc. All the urban problem can make the society citizen feel is not balmy and indisposed stay in the themselves town. In environmental management and development of urban needed by comittmen and involvement of all society citizen. wide role and also citizen of urban society in policy making,

accompanied by the high mainstay level, representing especial condition to realize the going concern urban development and with vision of environment.

By comprehending above context have righteously arranged to redo the understanding of slums society with the more integrated policy of macro and micro scale. In level global, the importance of reassumption to more to balancing of fast speed of development among Surabaya with the vinicity town. Even in macro level, between region of North and South East Java. Development generalization more or less will reduce the urbanization and influence generated among other things mushroom it slums in urban (Surabaya).In other side, effort government of Surabaya in facility of all worker which live in the region hinterland, presumably make proper supported. For example economic train of Surabaya-Sidoarjo which solid enough its passenger is in time clock come home and leave to work. Easily transportation facility very supporting of effort reduce incidence of settlement which improper in Surabaya.

Some effort which can be done by government of Surabaya among other things is publisher KTP as data of administration demography, arranging in order dwelling among which must be arranged in order by marginal settlement which still able to be improved by its environment quality so that come near the competent standart. What do not less important is reassumption instruct the development of Surabaya to realize the long-range and also middle meter development

4. CONCLUSION

House and adequate settlement facility represent the very fundamental requirement is necessary for human being in passing off its life as human being. In nations is expanding problem of quality of housing and settlement facility in metropolis [s very felt. This because of very fast townee accretion because migration and the limited farm destined by]for adequate settlement. The limited fund in settlement and town management in face of above mentioned problem demography have also caused the facility of housing and settlement become limited and costly is its defrayal. In urban area, citizen which is at least fullfiled by the requirement of housing facility and its settlement by adequate is those who have low production to.

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1 - 5

An Environmentally Upgrading Approach in Slum Areas of Tanjungmas District Semarang

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ABSTRACT

Tanjungmas district is located in urban areas near the port and surrounded by industrial areas, which therefore the urban infrastructure especially the road is sufficiently available. This attracts people from outskirt Semarang to find job and economic opportunities and create slums. Slum condition is indicated as low income; 34% of inhabitants are working as a factory worker, high building density is up to 90% and there is a lack of housing utility. In spite of this, periodically this settlement is flooded and there is no legal ownership to their land occupied.

This research is intended to find strategy for alleviating those problems, by using triangulation method, delivering questionnaire to respondents and observation. SWOT analysis is also conducted to map domain problems and possible solution to it. Based on the investigation, it is recommended that the strategy must be done in several steps. Firstly is repairing the periodic flood. Continously, the neighborhood is upgraded towards infrastructure installation which is done by people participation supported by government and donor aid. Secondly, giving people options to legalize their land by renting the land to the government since most land in Tanjungmas is belong to PT. Kereta Api Indonesia. Finally, the economic condition must be stable by giving access to people to get micro credit and create micro enterprises. It is clear that this recommendations can be sustain if there is supported by government commitment, so that people live in Tanjungmas will no longer be afraid of being evicted from their land.

Keywords: quality of life, strategy, slums

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1. INTRODUCTION

Housing is a basic need; especially for low income people, who see housing as capital goods; which means to generate income and reach prosperity. However, for the low income people, housing access in urban areas is difficult since the land price is relatively high. Therefore many of them create housing near workplace and in vacant land with inadequate infrastructure which then formed as slums and squatters. Slums and squatters in Semarang are classified based on its location, which are in the Central Business District, periphery areas and urban areas. Its distribution now reaches to 42 locations. Early investigation in 1963 found 21 locations of slums and squatters, and according to 2002 investigation the location increase to 42 and found mostly in Tugu, North Semarang, and Genuk District (Ridlo, 2002: 52).

This research was undertaken in Tanjungmas, which categorized as urban slums and squatters. It is located near the port and commercial areas. It has grown illegally (Bappeda Kota Semarang, 2008). In 1960, it was only swamp areas. The first house was a dormitory for PT. KAI employer (single person). Later on, lot of houses is constructed near the dormitory and creates squatter. This is worsened with flood and tidal intrusion that happens in this area periodically.

Population growth is the main factor for triggering housing need, while the social economic condition of the community and government commitment in urban management plays important role in the housing quality. Slums and squatter are the results of an increase of low income population growth in urban areas and mismanagement of the government in supplying basic infrastructure.

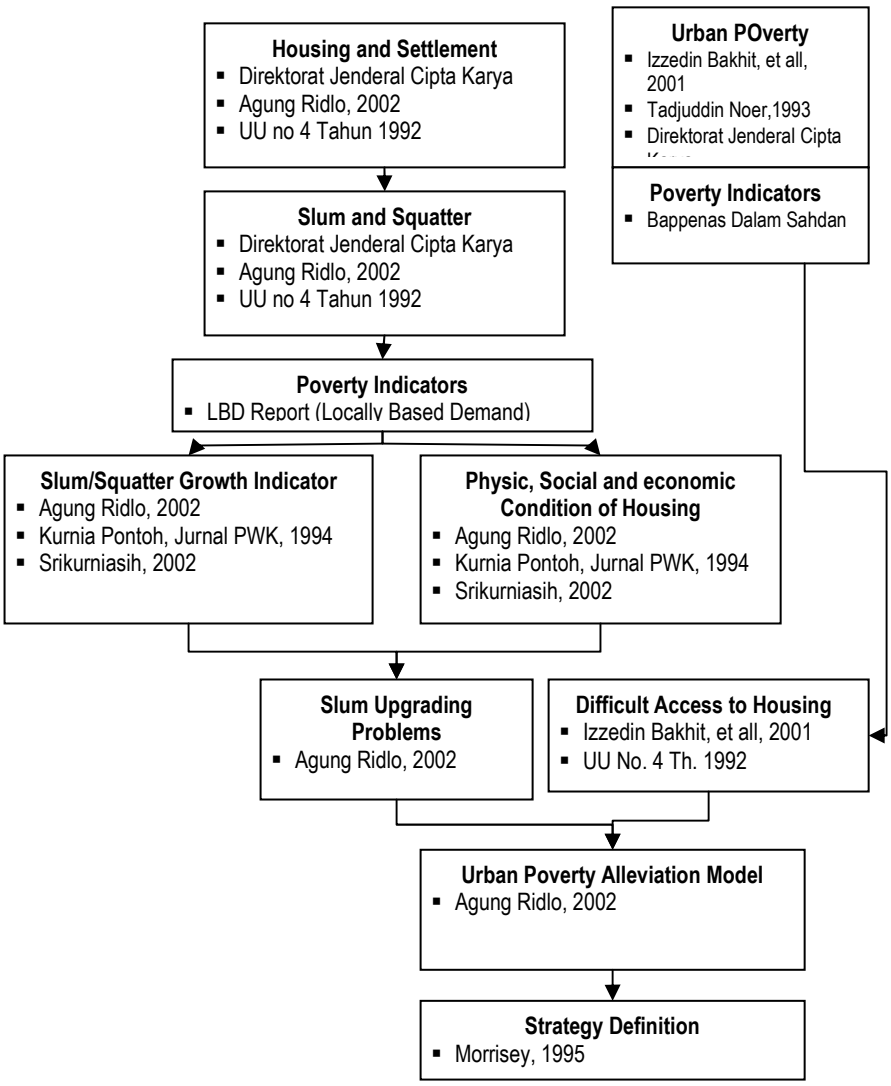
The increasing of squatters and slums in Tanjungmas is affected by high urban density followed by the allocation of industrial construction and mass production of commercial areas. This becomes pull factors for immigrants (People from Demak, Solo, Kebumen, Wonosobo, Tegal) to come and settle in Tanjungmas. The main reason is because their settlements are near their workplace, therefore becomes a strategic location, though is not supported with basic infrastructure. This becomes an issue to define a strategy as a guidance to design and plan the slum and squatters. Strategy is an approach to alleviate problems arises in slums and squatter, and giving clear foundation to solve problems based on its potency and weaknesses. Not only that, strategy will also have to include the physical, economic and social context of the problems. Based on above description, hence this research is conducted to formulate effective strategy to upgrade slums/squatter especially related to the improvement of quality of life.

Picture 1.
Tanjungmas District (shown in red border) Map

2. ANALYTICAL FRAMEWORK

2.1 Slum/Squatter Growth Indicator

Slum/squatter is mainly caused by economical problems such as poverty and economic crisis. However, disaster like flood, earthquake, mountain eruption, landslide and war can also generate a slum condition (Ridlo, 2001: 27). Economic and poverty problems trigerred people to migrate to urban areas and seek for better opportunity (income). Many people tend to come to town because the important aspect of their proximities and amenities to urban areas as workplaces and the local government has not ready to supply for housing. Based on the background, the analytical framework will then be drawn as follows :



Source : Analysis, 2008

Diagram 1. Analytical Framework

Informal employment is usually classified in 4 groups (Bremen dalam Ridlo, 2001:29).:

1. "*petit burgeois*", is the people own business, with enough capital and skill
2. "labor elite", for those who gain fixed income

3. “proletarian”, is the low wages worker and people own business with limited capital
4. “lumpenproletariat”, or “pauper” is people who usually breaks the law for living.

From classification above, proletarian and lumpenproletariat are mostly found in Indonesia. According to Friedmann dan Sullivan in Ridlo, 2001, then the social economic group of an urban areas are expanded in two main group which are:

1. Dependant informal sector, consists of 3 types
   - corporate professional managerial
   - corporate supervision sector
   - corpotare production.
2. Independant informal sector, divided in 2 types
   - family enterprise sector,
   - individual enterprise workers

Result from LBD (*Locally Based Demand*) Report, depicted 29 indicators to describe slums/squater condition as follows:

Condition	1. Location	2. Population	3. Building	4. Infrastructure	5. Social Economic
Aspects	Land Tenure	Population Density	Building Construction Quality	Clean water	Poverty rate
	Building Ownership	Family Size	Building Density	Drainage	Income rate
	Fire occurrence	Household number	Building Facility Management	Road	Education rate
	Flood occurrence	Population growth		Sanitation	Criminality rate
	Landslide occurrence	Crude mortality rate		Open Space	
		Infectious sick occurrence		Waste	
		Infant health			

Source : Planning and Housing Department, 2002.

Table 1. Slum Indicators

2.2 Slums/Squatter as an Indicator of Low Quality of Life

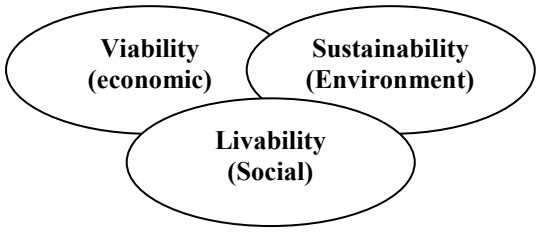
Quality of life is a general concept. As a definition, quality of life describes a living condition, both in physical and non physical condition, tangible and intangible context. (Yuan, 1999). It can also be identified as a prosperity level, satisfaction level and a comfortable living standard. (Campbell in Yuan 1999). Quality of life (QoL) is mainly affected by the personal life and the material life. Environment is the external life as a support to human activities, and determining the satisfaction level. On the other side, the internal life like happiness, comfort and individual priority is dependable on each characteristic. The determination is also measured by people approach to

well being, though it can not be measured using financial and viable variables only (Bryson, 2000). In short, there are 3 approaches to identify QoL (Brock in Yuan 1999:6) :

- An Approach to see people characteristic, which usually is affected by people religion, belief and norms. As an example is the way people help each other as the representation of people belief in kindness.
- An approach to QoL based on satisfaction, so that people value options and choice based on economical perspective.
- An approach to see Qol based on meaningful individual experience.

Urban areas dynamic also influence QoL in sustainability, viability and livability, as described in explanation below (Yuan,1999:147) :

- *Livability* in urban areas is translated as a harmony and social variation in city development. The focus achievement for this measurement is an open access to everyone to services and facilities, which resulted in people comfort and happiness.
- *Sustainability*, is a product of effective urban management to minimize negative impact to environment. The indicator is the linkage between spatial and environment development to maintain enough resource allocation to the future.
- *Viability*, is needed to ensure that the city able to provide economic base and employment creation. The main aspect is the infrastructure investment to supply urban productivity.



Source :Stimson,Western,Mullians and Simpson,,1999:148

Diagram 2. QoL Linkages to Urban Areas

Low income people have limited access to an affordable housing and good neighborhood. Slum/squatter is sometimes seen as lack of infrastructure and low human resources. They access informal economic of the city which is characterized by low income level and weak law enforcement. To perform strategy, housing supply should fulfill sufficient comfortable and satisfaction to inhabitants (Ettinger in Lelia 2007:35):

- From the health and safety point of view, a house should be able to protect from climate disturbance and maintain comfortable usage.
- Have adequate rooms to facilitate simultant activities
- Allow enough access and proximity to infrastructure

2.3 Best Practice of Slum Upgrading in Thailand and Bangladesh

2.3.1 Baan Mankong Program in Thailand

Thailand is one of countries who had slum upgrading strategy. It started with forming community upgrading, that is the people participation in institutional framework to alleviate problems related with slum condition. It is called *community organizations development institute* (CODI). CODI has a significant contribution to community development while the housing quality improvement activities are used as a means to community development. Thailand has successfully developed 80 community organizations. Starting with giving access to saving and credit in abundant amount. Afterwards, community network is built to explore community membership and help to solve housing problems up to housing construction.

After decentralization in 2000, this community organization is then widely explored and strengthened. Baan Mankong (means secure housing) is a program who let low income people to take control their need, to overcome problem, accessing land tenure and basic urban infrastructure. One success study is in Ruam Samakkee community. This community registered 124 household as a member. They settle in an area of 0,8 hectare, that is legally belong to CPB (Crown Property Bureau) in Ramkhamhaeng Soi 39, Kao Pattana. By utilizing the community organization they able to negotiate the land ownership from slum to long term rent (30 years) with CPB. Following that, they hire an architect to design their neighborhood, after all the land registration requirement is fulfilled and the agreement with CPB is set. The Ruam Samakkee community consists of several units that in charge of loan and saving, cultural preservation, youth and health activities also environment protection activities. Basically, the community has 3 different groups that are:

- Community commission (18 person), in charge of internal business focus on community management
- Housing Saving commission (10 person), has an authority to coordinate with external agencies in funding for housing construction
- Baan Mankong commission is to make sure that all the process is secured up to home ownership.

Learning from Baan Mankong experience, it can be concluded that successful factor for this community are:

- Strong leadership
- Spirit of unity from the community
- Continuous brainstorming to solve community problem
- Works in stages and has a accountable and transparent planning
- Good network and support from external agencies like CODI, CPB, Chomchon Thai Foundation, and Wang Thonglang Distric Office.

2.3.2 Slum Upgrading in Bangladesh

To overcome slum problem, Bangladesh refuse aid from overseas countries, regarding Bangladesh economic condition, which is still in a malaise period. Therefore, the government decided to establish and strengthen the economic condition by encouraging internal potency by serving micro credit for housing which called ASA (*Association for Social Advancement*). ASA combined financial, social, and membership approach. ASA gives credit without collateral, but the member should repay the credit on time. Credit is given on community organization and targeted to self aided community. Another characteristic mentioned that the service is a centrally controlled. The member should participate actively by holding routine meeting to overcome internal problems.

It is clear that learning from Bangladesh case, government commitment plays important role to slum upgrading project. Bottom up planning with participation from the society also determine the success of ASA project.

3. RESULT

3.1 Tanjungmas Characteristic

Based on survey result, it is indicated that people occupation in Tanjungmas are industrial labour 34%, employee 21%, merchant 10%, other 17%. However as many as 21% of the inhabitants are unemployed. The average income are Rp 600.000 – Rp 800.000 monthly for a househokd with 3-4 family member. More than 50% of their income are used to buy basic needs and this indicates that no more money left to upgrade their quality of life. This is worsened with periodic flood and water intrusion which preventing them from being economical and strategic to access money and employment. Below are photographic description of Tanjungmas slum condition.

Bad drainage system

Clean water condition

Periodic water intrusion

Waste Disposal in Vacant Land

Temporary housing

Permanent housing

High density building

Source : Field Survey, 2008

Picture 2. Tanjungmas Slum Condition

Using SWOT analysis to create strategy, first that need to be done is linking each of quality of life aspect to slum condition in Tanjungmas. Since there are 3 aspects recognized,i.e physical, economic and social , so the linkages can be describe below.

a. Physical and Eonomy Linkage
   63 % of the population has no legal land title, and 80% of them are migrants. The proximity to the workplace is the main reason

for living in Tanjungmas, though the basic infratructure are not well provided. For clean water and electricity, most of the inhabitat ilegally connected to this service. Low income make them hard to improve building quality by renovating houses to be higher than the road in order to avoid flood and intrusion.

b. Social and Economic Linkage
Approximately 46% of the people are senior high school graduate and 31% are junior high school graduate and only 3% are graduated from bachelor degree while the rest are uneducated people. This makes difficult for job employment and chance for improving quality of life.

c. Physical and Social Linkage

High density building makes uncomfortable living, however it has positive effect by performing stick cohesion in mutual relationship. It is clearly summarised from questionaire result.

By observing those characteristic, then compared with lesson learned from Thailand and Bangladesh, then alternative is drawn as follows.

Aspects	Thailand	Bangladesh	Tanjungmas
Physical	*On-site Upgrading strategy focus on built environment condition, population number, housing pattern and infrastructure delivery.*	Slum upgrading on improving housing quality and environment	Environment upgrading through flood and intrusion prevention.
Social	Community empowerment and networking with external agencies.	Community organization formation to access micro credit services	Community empowerment on environment enhancement.
Economy	Help Housing Saving Commission coordinating with financial external agencies.	Refusal of overseas aid and creating ASA.	Improving and fostering small enterprises activities using revolving fund and accessing credit micro.

Policy	Long term land ownership	Micro credit access that combined *financial, social,* and *membership approach.*	30 years (long term) land rental with PT. KAI.
Strategy Stages	Forming Environment Upgrading Community in: 1. Land legality 2. Limited housing saving 3. Home occupation security.	Low income community formation by : 1. Accessing credit in group 2. Housing and environment improvement	1. Community empowerment to overcome flood and intrusion problem 2. Processing Land legality 3. small economic activities enhancement 4. Environment upgrading.

Source : Analysis, 2008

Table 2. Strategy for Tanjungmas District

Identification to strength ad weakness is needed to perform good and effecient startegy. In Tanjungmas, the critical condition that need to be emphasis to strategy formulation is :

- Economical value of the location. Therefore everything should be focus and targeted to maintain and improving those value.
- Slum upgrading approach by ensuring land title initially. This is adopted from Thailand implementation in slum upgrading, that the key point for successful slum upgradng is land tenure security. Moreover in Tanjungmas, as a solid network is already formed so that it is easily to get cooperate with the local goverment gives soft loan. After that the community manage the fund in order to actively involve the community member to access, occupy and own houses.
- Work forces optimatisation by encouraging them to create small economic activities by building community organisation. It is important to create sense of belonging to their neighborhood, so that the sustainability can be achieved.

It is clear that for Tanjungmas district, an approach to environment and neighborhood are essential in performing effective strategy. In overall, an environmentally approach strategy will give positive impacts to the neighborhood. Guided and well planned community will enhance its

economic value, so that giving opportunity to the inhabitants to achive a comfortable living standard.

3.2 Concluding remarks

Slum and informality is not a problem if seen in different perspective. Low income people is a independent individual who starve for living. Housing and environment has physic and social value. In Tanjungmas case, the physical aspect is the dominant factor affecting their Quality of life, owing to the condition of periodic flood and intrusion. Environment enhancement gives significant contribution to economic, while economic activity of the community will help inhabitants to manage sustainable neighborhood and finally achieve family welfare.

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1 - 6

The Upgrading Concept By The Approach of Social Housing
Case of Yogyakarta

Deva Fosterharoldas Swasto

ABSTRACT

The increase number of urban population demands the new housing units. However, there is a gap between the demand and the supply, since the number of that unit is unequal compare to its demand. As a result, such cases of inappropriate housing and even settlement may be found, in which it is given term squatter and slum. This situation can occur in such places like in riverbank area, under the flyover and others. During its progress, it then pushes problem in many aspects. For improving this kind of condition, many approaches have been taken in the framework of upgrading and or urban renewal, such as kampong improvement program (KIP), affordable / low cost vertical housing (*rumah susun*) project, and others. However, these kinds of housing approach are generally considered 'just' based on project (or by program / by project), while the essence of defined concept is relatively unclear. This paper proposes the concept of social housing as alternative approach for conducting upgrading and or urban renewal project. The dialogue is tended to improve the quality of existing concept (in upgrading and urban renewal), in which the goals for accommodating (poor) people can then be also enhanced.

In general, the concept of social housing can be described as non-profit, both aim and management, and is purposed for low income people (middle income and below). This social housing do not stand alone, in which it work as part of macro scheme and integrated with other approach, such as the delivery of public facility (the product of social housing do not only become 'general commodity'). The concept of 'temporary' and 'sustainable' is underlined as the main concept, in which it then be derived into other running approach.

In Yogyakarta, the concept of upgrading and urban renewal is tried to be implemented in rearranging slum area along Code riverbank. However, the

approach of social housing is not formally introduced to improve the quality and overcome the problems, and not yet described as defined approach.

Because of that, this paper would like to discuss what the concept of social housing is, in what condition it can be implemented, and how far it can support the success and continuous improvement of the implementation of upgrading and urban renewal concept.

Keywords: upgrading, renewal, social housing concept, temporary, sustainable, Yogyakarta

1. BACKGROUND

The increasing number of urban population further demands more new housing units. However, there is a gap between the demand and the supply, since the number of that unit is unequal compare to its demand. As a result, such cases of inappropriate housing and even settlement may be found, in which it is given term squatter and slum. This situation can occur in such places like in riverbank area, under the flyover and others. During its progress, it then pushes problem in many aspects. For improving this kind of condition, many approaches have been taken in the framework of upgrading and or urban renewal, such as kampong improvement program (KIP), affordable / low cost vertical housing (*rumah susun*) project, and others. Nevertheless, these kinds of housing approach are generally considered 'just' based on project (or by program / by project), while the essence of defined concept is relatively unclear.

In Yogyakarta, the concept of upgrading and urban renewal is tried to be implemented in rearranging slum area along Code riverbank. However, the approach of social housing is not formally introduced to improve the quality and overcome the problems, and not yet described as defined approach. To discuss above situation, this paper will explore what the concept of social housing is, in what condition it can be implemented, and how far it can support the success and continuous improvement of the implementation of upgrading and urban renewal concept, in case of Yogyakarta.

2. DEFINITION AND CONCEPT OF UPGRADING AND SOCIAL HOUSING

2.1 Upgrading

Generally, the concept of upgrading is related with the effort of enhancing the quality of housing. In the broader umbrella, this concept can be touched within the framework of urban renewal, since they have similar aim.

Originally, upgrading (or slum improvement) has come to mean a package of basic services: clean water supply and adequate sewage disposal to improve the well-being of the community. But, fundamental is legalizing and 'regularizing' the properties in situations of insecure or unclear tenure. Upgrading customarily provides a package of improvements in streets, footpaths and drainage as well. Solid waste collection is frequently included with its positive impact on health, along with street lights for security and night activity (source: http://web.mit.edu/urbanupgrading/upgrading/whatis, accessed march 2009).

Furthermore, it is said that physical improvement is only the beginning. Health issues need to be addressed by providing clinics and health education programs, school facilities and teacher training are needed to attack the lack of basic education, and lastly programs are offered to increase income earning opportunities and the general economic health of a community. It is the being considered that upgrading is the start to becoming a recognized citizen. The most important element for success is commitment by all: the city, the community, and the families. A sense of partnership must be developed among them, and secondly, upgrading must meet a real need - people must want it and understand the value (source: http://web.mit.edu/urbanupgrading/upgrading/whatis, accessed march 2009).

Levy (1997) said that the concept of urban renewal began in 1949 (with enactment of the Housing Act) and the goals were defined to eliminate substandard housing, revitalize city economies, construct good housing and reduce de facto segregation. Therefore, this urban renewal is considered as a housing program. Moreover, Levy said that this action is considered as a kind of 'creative destruction', since it tore away an old and obsolescent urban fabric and replaced it with something newer and brighter economically viable building. At that time, the involvement of the community was absent. Later, Levy suggests the importance of community development in the frame of urban renewal and in long term continuity process. In addition, Couch (1990) said that urban renewal is a process of physical change or change in the use or intensity of use of land and building, which is the inevitable outcome of the action of economic and social forces upon urban areas.

In Indonesia, the upgrading concept was conducted in 1969 by the local government of Jakarta, with the name of Kampong Improvement Program / KIP (Kuswartojo, 2005). The aim of the program is quite similar to above urban renewal concept, which is to improve quality of the environment. The implementation of the program is the development and improvement of settlement infrastructure, such as road, drainage, water supply, sanitation and garbage management in slum area, and the enhancement of the community. The concept of *Tribina* (three efforts) was introduced as the main concepts, which are the enhancement of environment, economic, and the community (*bina lingkungan, usaha dan manusia*).

By looking above situation, the concept of upgrading can be seen as the effort of physical improvement as well as other enhancement program, such as economic aspect, social existence, and others. However, this upgrading concept in some cases is sometimes lost its essence. Occasionally, the upgrading effort is conducted for 'merely' quickly solving the problem and just targeting local situation. In addition, it is sometimes conducted by focusing 'only' on physical infrastructure improvement. As a result, the sustainability of this project is in question and later on it sometimes ends up with similar 'slum' situation.

2.2 Social Housing[4]

There are some definitions about the concept of social housing. Juwono (1999) said that the concept of social housing is a system of non-profit housing, which is purposed mainly as a part of social security effort, or is functioned to accommodate social needs. Moreover, it is said that the development of social housing is become the task of the government, together with other sectors or stakeholders as responsible actor. Within its limited definition, Juwono (1999) said that social housing is being understood as a 'public housing'.

In addition, based on some articles within the workshop of "Social Housing Development System: As Alternative" (conducted by Indonusa-Tarumanegara-Trisakti-PAJ-Ikaned, Jakarta 1999), it can be summarized that the concept of social housing has the meaning of 'non profit' (both objective and its management), is purposed to be delivered to the low and middle income, and also is functioned as living facility, as a part of other social facilities. It is also underlined that the concept of 'housing' in this 'social housing' is 'not merely' usual commodity. From cases in other countries, the concept of 'temporary' is also highlighted. It means that the social housing concept here is not 'only' housing that is built by the private sector (non government institution or even community) for living 'permanently', but it is more purposed to be such kind of temporary housing for specific reason.

Furthermore, some experts and practitioners in housing issue said that the concept of social housing is in the same track with the concept of seeing housing as social overhead capital (Diamar, 1999). Iskandar (1999) said that the definition of 'non profit' in this social housing concept is not merely the definition of non market (in economic term), but also related with the issue of utilization and responsibility that might emerge (Iskandar use the word 'accounting'). Some examples of social housing concept that come into

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[4] Originally written by Swasto, Deva Fosterharoldas, taken and modified from "The Concept of Social Housing as Alternative Solution for Disaster Anticipation and Recovery", with the same sub title

practice are dormitory (*asrama* in Indonesian word), boarding house (*pondokan,* sometimes it is translated into *rumah singgah*), rental housing, Community-Based (or Group-Based) Housing Development (*P2BPK*) and other rental units (Iskandar, 1999 and Juwono, 1999).

In many countries, the concept of social housing is implemented as a reconstruction effort post the occurrence of World War II. Germany and The Netherlands are two examples of country that do this kind of social housing concept, which is considered have good experience. In Germany, the development of housing, which used this concept of social housing, was implemented with the idea that at that time, housing should be the engine of economy (Hadar 1999). It means that housing was purposed not only to be a living unit for its people, but it was also used to 'generate' daily life of the community. At that time, people, with no job opportunity, are pushed to take part in this housing mechanism, so they can earn both: house and income. Furthermore, Hadar (1999) said that the implementation of the social housing concept is depending of political will, which (mainly at that time) prerequisite good communication and relationship among politician, government, expert / academician, and society.

In the Netherlands, the concept of social housing had been taken quite long, mainly with the enactment of Housing Act of 1901 (Van Der Hoff, 1999). The existence of social housing organizations as the main actor of housing delivery is recognized by the government and is also given strong attention. Here, the social housing concept is mainly related with the concept of 'public housing' that is built by the private sector. The main purpose is to match the demand and supply side. However, there is also kind of housing which is purposed to offer accessible units for the low income people or even jobless person. They are provided temporary low-cost rent units (with government subsidy) for some (temporary) period (for example six months) until they are able to work or have permanent job. This housing or units is similar with the concept of boarding house.

In Japan, there is also concept of social housing, with different form and reason. The concept of social housing is implemented in shape of public rental house when there is disaster occurrence. This public rental house is built in lot of number, and is offered with inexpensive rent by the local or provincial government, after disaster (Yuzo, 2006). The concept is done in two forms, which is temporary shelter that later is continued with the more permanent units for the victim (people). Basically, the temporary shelter uses public facility or is built in open area (ground), for instance by using tents, for approximately 3-6 months until maximum 2 years, after disaster. After that, the temporary shelter should be left, and will be replaced with the permanent units, in other location.

What is then proposed in this paper is the concept of social housing for accommodating the poor (medium income and below), related with the concept of upgrading, and is not the concept of social housing in 'private' situation (public housing constructed by private sector).

3. UPGRADING IN YOGYAKARTA[5]

In Yogyakarta, the upgrading program that can be seen implemented intensively during recently is the environment quality improvement that takes place along the Code River. One of the upgrading activities is the development and building of affordable vertical housing (*rumah susun / rusun*) to accommodate people living in the riverbank. Although this activity is different from the original meaning of 'upgrading' (which is 'merely' enhancing the quality of the environment by maintaining most of the structure) and closer to 'urban renewal' concept (which is conducting relatively new replacement for existing condition), it is considered that the aim is similar, which is to improve the improper condition of the targeted location.

This example is the development of *Rusun* Cokrodirjan and *Rusun* Tegalpanggung. One of the cases that will be discussed is Rusun Cokrodirjan. Looking at its history, the rusun of Cokrodirjan is erected above local government-owned land in Code riverbank. The existing location was used for education facility (elementary school). The *rusun* become pilot-project of vertical housing in Yogyakarta. This *rusun*, which formally opened on 4th October 2004, was built to renew and rearrange riverbank area (Code River) in Yogyakarta.

Picture 1. Situation of Code River

Picture 2. Situation of Code River

The rusun of Cokrodirjan consists of 'only' 1 type of unit (21 m^2), with total of 72 units and has 4 floor. The 1st floor is occupied for public use, service and social facility, while the 3 other floors are occupied for residential. The targeted resident for rusun of Cokrodirjan is people who live

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[5] Originally written by Swasto, Deva Fosterharoldas, modified and taken from "Creative Spaces on Affordable Vertical Housing (Rusun): A Sharing Experience". Most of the data is taken from Wulansari, Maulina, "Low Cost Vertical Housing in Yogyakarta: Integration between Residential and Commercial Area"

nearby (around the riverbank) and have occupation in private sector. Some of them work in informal sector (street vendor / *Pedagang Kaki Lima / PKL*) in Malioboro. The orientation of the building is 'organically' facing the river, in which the entrance can be accessed through narrow path (gang) and river zone way. The renting system is conducted as the approach, while the amount of rent is is Rp. 85.000 for 2nd floor, Rp. 80.000 for 3rd floor and Rp. 75.000 for 4th floor (Wulansari, 2006).

The *rusun* of Cokrodirjan is equipped with many public facilities, such as multiple use room, parking area, communal bathroom (*Mandi Cuci Kakus / MCK*), community office (*RT / RW*) and commercial space with the rent of Rp. 55.000 (occupying unit of 3x3 m^2 with non permanent partition). The manager of the rusun is also work and 'live' there, to control the maintenance of the building day to day

Picture 3 Rumah susun Cokrodirjan

Picture 4 Rumah susun Tegalpanggung

4. USING SOCIAL HOUSING APPROACH FOR UPGRADING

In general, it can be said that the concept of social housing has the meaning of 'non-profit' (both aim and management), targeted for low income people (medium income below) and functioning as residential facility as a part of other social facility (not stand alone as usual goods / commodity). The concept of temporary is the main essence that has been introduced since its appearance and already adopted by many countries.

Beside above situation, social housing prerequisite also the goodwill of the community in enhancing their own capacity in some limited period (for instance several months or couple of years). Therefore, the community can, in the end, access and affords more appropriate situation or unit of housing.

Next, they can do rotary situation in which they roll their existing residential unit to other people who need it more (or in other sentence, people who has similar situation with them in early situation). This kind of situation in short means the importance of community participation and development.

The above situation is parallel with what Levy (1997) stated that in general, the community development is differ from urban renewal, mainly in its approach and focus. The community development is more humanistic and focuses on rehabilitation, while urban renewal is tend to use clear-and-start-from-scratch approach. It can be said then, that the essence of community development is quite similar to social housing.

In addition, beside above considerations, the social housing (concept) is expected to become the cumulative manifestation from many aspects, which are technology (the knowledge of construction, requirement / standard of building or building codes and its environment), education (society awareness), social and cultural aspect (manifestation of mutual cooperation, community empowerment, self-sustained, self-dependency, local wisdom), economic resilience and sustainability, and others.

5. DISCUSSION

The concept of Upgrading in Yogyakarta, by looking the case of *Rusun* Cokrodirjan can be categorized into having similar essence with the social housing approach. The things that can be explained are temporary situation (that can be seen from its rental situation), targeted for low income people (or medium income and below) who live nearby, aimed for non-profit condition, and conducted to enhance the quality of the community. However, the concept that is not clearly seen is the community participation itself, mainly related to their awareness in improving their life, which then indicated in their will to achieve better situation or find better location. If this event of non-participation occur in this upgrading effort, it is worried that similar situation with usual development of *rumah susun* in some other place can happen in term of inappropriate circumstances, or become the new situation of slum. In addition, the limited length of living within the relocation area here is not become the main issue. As a result, the community thinks that the relocated building or place belong to them, and also the subsidized situation. They feel enjoy and assume that they can live there, and is supported with many ‘facilities’, as long as they want.

In general, the slum situation in some *rumah susun* (as a result of upgrading) in its next development occurs if there is no goodwill of the community or, in the other side, there is no management system. Logically, this situation emerges whether since the beginning the community does not have the sense of belonging or there is no consequence in terms of responsibility. Within social housing concept, it is underlined that what community is now use (‘enjoy’), related to their unit of residential, is just a temporary facility that must be returned back with the same condition that they use in the beginning. Correlated with above reason, it is a need that community understanding shall exist and they should cooperate with that reality. The facility is not cost-free and it is subsidized to meet community affordability. The fact that the land of *rumah susun* is belong to ‘other’

(government, institute/foundation, or in this Cokrodirjan case is *Sultan* Ground) must become part of community understanding.

Related to system or management system, the upgrading concept should not only focus on physical improvement, but should also be aimed to enhance community life. In social housing, this condition is conducted by using itself as movement engine (generator) of economic aspect, such as during its development (when erecting the building, like the similar case in Germany, in which people can earn both income and unit of housing), during its management (by creating mutual community organization or *paguyuban* as the manager of the *rusun*) and others, which can stimulate economic opportunity. On the other side, the existence of this local social housing organization can become the bridge between community awareness (by themselves) and related improvement program from the government or NGO in form of such kind of boarding house (*rumah singgah*). In the case of Yogyakarta, it could be in such activity of community empowerment of the riverbank people (*komunitas pinggir kali*).

Picture 5. The existence of "paguyuban" in Rusun Pekunden, Semarang

Picture 6. The existence of "pasar" (traditional market) in Rusun Pekunden, Semarang

Within bigger umbrella, social housing underline the need of integration among other aspects, such as close range to work place, easiness access to public facility and others. This condition sometimes is not clearly seen in upgrading concept (for instance in some cases of the development of *rumah susun*), in which the nearness or access to other facility is not become consideration or is not maturely taken into detail. In some cases, occasionally, the situation takes place incrementally and other consideration becomes a concern if only there is a problem. In other sentence, the upgrading concept sometimes just only relocate community to new residential accommodation that has better / complete sanitation facility, but is not considered to also fulfill it with complete public infrastructure such as health, education and trade facility, and public space. Related to this situation, the starting problem begins since there is no affordable or cheap land within the city. As a consequence, the relocation area is appointed into a location which is just an empty / vacant land, without considering the existence of other facility. In fact, this condition can be overcome with

strategy of above temporary concept, in which the relocated area is not occupied 'forever'. Because of that, the need of seeking new vacant land is not become a burden, since the relocation area is just targeted for a temporary period. Parallel with that situation, the system of conducting long term process in upgrading should also be implemented. The problem might not be solved quickly and instantly, but can be reduced step by step in ongoing process. Later on, there will be such kind of integration among needed supporting facility. In addition, the linkage between actors of housing delivery in this upgrading program is also important.

6. LESSONS LEARNED

6.1 Conclusion

Based on discussion above, there are some notes that can be delivered as lessons learned of upgrading and or urban renewal effort in real situation, related to proposed social housing concept.

- The upgrading and or urban renewal approach that is implemented in Indonesia is considered always based on good concept and intention. However, the detailed thought underlining the implementation is sometimes can not be seen clearly. As a result, the upgrading program is only become physical improvement without followed by related need such as social and economic aspects. In the end, the enhancement of community's quality of live (community development) is not become the subject.
- The upgrading and or urban renewal approach sometimes is not trailed by the emergence of community awareness or community participation during its cycle (initiation, implementation and management). As a consequence, community responsibility in improving themselves sometimes does not exist.
- The upgrading and or urban renewal concept is usually concern of only local situation and is expected can instantly achieve good result in short period. Occasionally, there is no deep consideration about the long term situation or related consequence in other situation, such as social aspect.

6.2 Recommendation

The concept of social housing can be proposed to perfect the situation of 'ordinary' upgrading and or urban renewal approach. However, these below considerations are based on *rumah susun* case in Yogyakarta. Since then, the delivered suggestion may differ to other situation. The complementary thoughts are:

- There should be community development approach in the concept of upgrading and or urban renewal. This situation will

create community awareness in always motivating themselves to achieve better quality of life and do not merely rely on subsidized situation.

- The concept of 'temporary' should always be underlined in case of relocation. Since that, the need of improvement will always take place in the mind of the community.
- There should be integrated consideration among physical improvement, social enhancement and economic development. This condition will support in minimizing future problems as a consequence of relocation (for instance in case of *rumah susun*). In addition, the community will then have capability in rolling their units to others, whether they have already improved themselves and achieve better quality of life in economic aspect. This occurrence is expected to take place in limited period (started from entering the relocation area), such as several months or couple of years.
- Upgrading and or urban renewal is an ongoing and long term process. Because of that, the impact related to implementation will always happen. Since then, it is a need to always think detail and consider future consequence. It is also a need that related actors (stakeholders) in this program of upgrading should be involved, which are the community itself, the initiator (government or NGO) and other related institution, included actors of supporting facility.

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1 - 7

City Slum Dwellings Participation in Forming Self-Standing Marginal Group

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ABSTRACT

The city development has caused the improvement of the city's physical quality and productivity, but also is directed to the establishment of the slum city. At present, slum dwelling which has become the organic space inclines to be approached by the formal development physical and social perspectives. In the policy development presently, this type of dwelling is not human and not in accordance with the formal city's layout. Actually, the potential and self-standing of the community no doubt supports the provision of national housing in the city. Nevertheless, at present, the existence of the organic dwelling is more observed as a dilemma of the city's development. Observing this observation, the government's policy is more oriented in the provision of the physical compared to facilitating the self-standing and capacity of the citizens in overcoming the requirements of dwelling. The question is how we observe this? Is there a potential that could be developed to overcome the problems of housing in the city? This paper is written based on a dwelling in Jakarta categorized as slums and wilderness. This study is aimed to know the potentials possessed by the community in overcoming its requirements.

Keywords: slum dwelling, self-standing and capacity.

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1. BACKGROUND

A report from The Comparative Urban Studies Project at Woodrow Wilson in 2006 tells of the increment of the urban population in the world which is meaningful, in 2000, 40 percent of the world's population resides in the urban, in 2005, 50 percent of the world's population resides in the urban. Meanwhile, the report from the United Nations and World Bank showed a relatively high growth of population in the developing countries, where in the report, in 2050, more than 85 percent of the world population resides in the developing countries and 80 percent of the population in his developing countries will stay in the urban.

The growth of large urban population has become a problem faced by the urban, because it was not capable to provide the adequate service and facility. With this decline or limitation, particularly in the urban, there occurs the dwelling in the form of slums.

The glittering city of Jakarta has attracted immigrants so that the city is piled up with these people. The level of additional population in Jakarta has reached 5 to 7 percent annually this becoming Jakarta as becoming denser. According to the People's Welfare Statistics of BPS and the population census data, the figure of density in 2000 has reached 13-14 thousand people per square kilometer. This is higher compared to the national average rate.

It was seen that the growth of the slum dwelling in Jakarta is very alarmed. With the slum dwelling region, it has become an indication of the inadequate national housing failure, both quantity (size) and quality so that in the housing sector, this has not been achieved. The community facility in providing an appropriate housing for themselves has not been implemented as optimum as possible.

With this phenomenon, the urban development has caused the increase in providing housing for its citizens. The limitation of the formal housing has inspired the community to make efforts of fulfilling their own requirements, This effort in one side has provide a solution in housing but on the other side the physical housing condition do not meet the requirements. This could be seen on the various phenomena of autonomy in housing, both at the legal grounds or the prohibited grounds. The existence of the illegal housing from the government's view or the city planning has caused a minor problem, such as the slums, environment damage and potentials as nest of crimes.

On the other hand, there is a solution towards the illegal housing (illegal organic housing later stated as HOTS), the government's policy is more focusing on the legal aspects. The government only sees the illegal view of people occupying these lands. Conversely, the government rejects "the organic character and potentials" and the government inclines to be oriented on the formal provision such as the national housing and apartments. The

people's assumption was not capable to build their own houses from the financial view and its implementation. Actually, many architectures or planners have shown the people's potentials if controlled and guided will result a big energy in the provision of an appropriate and healthy urban housing (Khudori, 2002).

This paper presents a number of experiences of the HOTS occupants who have struggled to obtain lands and construct housing so as to retain their existence. These experiences have shown that the HOTS occupants have the potentials really needed by the government on socializing the people. This research is a preliminary study in inspiring the community in providing the urban settlement.

2. HISTORY OF THE SLUM DWELLING

Urbanization and urban population growth have become an important factor in the urban development. The flowing rural community in trying their luck in the city has implicated on several aspects of urban living, both in the housing, transportation, economic, living environment sectors, provision of facilities and public reservations, both provision of open greening (RUTH) and garbage, layout and manpower, etc.

With the difference in the urbanization model character in Jakarta, the problem emerging has different characteristics. This indeed needs the different handling and approach, both in observing and solving solutions existing due to the impact of the urbanization.

The population density in Jakarta is quite high; this is due to among others the status of Jakarta as the country's capital city and as the government's center and business barometer. In 1996, the economic growth rose of 11 percent, but facing the crisis in 1997, the economic growth suddenly showed a minus contraction of 13 percent. Nevertheless, Jakarta still remains attractive of the incomers, why? The impact on the growth rising from the crisis is the increasing urbanization in 2000. Often people asks why they want to stay in Jakarta, while Jakarta is identical with the problems of traffic jam, pollution and other urban disease. The answer is very simple; they want to seek their faith in Jakarta.

The decreasing income caused by the economic and political crisis in Indonesia had increased drastically the community's proportion that is in the poverty line of 11 percent becoming 45 percent. This of course is very alarming if the spatial implication

And social economy is under consideration. In this condition, it is not astonishing that the informal sector, both in the city's economy and the provision of housing flourished since the monetary crisis ten years ago This is not only experienced by Jakarta but other Asian countries. With the

working opportunity becoming scarcer, the figure of working termination is high while the income has decreased. The Domestics Regional Product Income (PDRB) becoming weaker, the condition and community living quality standard showed declining. The capacity of the people's purchasing power has declined significantly including the access on a reasonable housing. Thus, it's no longer strange if the problems of slums or illegal dwellings have become more acute. The slum dwelling showed a change from time to time, and more astonishing is the growing slum dwellings if observed from the unclear land ownership. This situation has become one of the causes of conflict in the urban areas.

3. RESEARCH OBJECTIVE

The objective in this research is the HOTS dwellings in the SP district, PI sub-district in North |Jakarta. The dwellings have met the physical and social characteristics as illegal dwellings, as explained in various literatures.

3.1 Literature Observation

The illegal dwellings have become phenomena nothing strange seen in big cities such as Jakarta. There are a number of categories: (1) Dwellings occupying lands not owned illegally, (2) Dwellings at the river banks, train rails or other prohibited lands or dwellings. Actually, these dwellings do not provide funds for building their dwellings. But much funds must be spent to occupy the space in become an appropriate place to be occupied. These funds consist of funds for the authorities, unauthorized people, community leaders, and those who have already occupied it.

3.2 Location

The government, city planners or community often considered cynically on the illegal dwellers due to among others: (1) Principal cause of slums and obstruction of environment, (2) Cause of damage or environment mishaps such as environment pollution, flood or landslide, (3) Nest of crimes. The third assumption is quite dangerous and has become a threat for the surrounding community of the citizens in general and a threat for people who already there. This assumption has caused them to be evicted (not only due to the illegality in occupying the land) although they are actually the rightful "citizens" having the right to occupy.

But, is this true? John Turner considers a house as not only as a "residence" but "a process". In the view of a democratic socialist, according to Turner, the government should facilities its citizens to build it themselves.

But the condition in developing countries is difficult to be implemented. The government is more confident in the mechanism like constructing mass housing or apartments by the developers. The assumption of funds will not be efficient if processed by the community.

If only we look at it deeper, actually the slum dwellings have given an answer for living for those staying in them. With any assistance whatsoever from the government, those who stay in the dwellings are capable to develop its own economy. They do not need the banking credit or state revenues, because they do not have the access and the simple financial system probably. They could afford to use the unlimited natural resources so they could refrain from the hardship living in Jakarta. Many of them are capable to recycle the unused materials becoming something useful for them. As a self-supporting, they are capable to meet their needs for their own house. Economically, these dwellings have brought in materials and cheap manpower to participate in rotating the city economy in the informal sector.

This research is aimed to cultivate more deeply phenomena of forming illegal dwellings and potentials for inspiring the community. This study is only a beginning of a study on the formation of a dwelling and further efforts to develop a solution theoretically or technically useful for the community and the government. This study forms the self-standing of the community through the physical, social, economy and cultural approach in the effort to form the self-standing of the community in the slum dwellings.

3.3 Questions proposed:

(1) How can the community construct dwellings?
(2) What potentials do they develop to meet the requirements for a house?
(3) What factors those support them?

3.4 Objective of the study:

(1) To know the values which will become the basis of creating a dwelling?
(2) To know the supporting factors?

The benefit of this study is to give contribution on inspiring the city citizens to construct their dwellings.

4. RESEARCH METHODS

This research uses the naturalistic paradigm based on the following reasons: (1) Limited relative objects so that it requires a depth exploration, (2) Study object covering values so that it could use the original survey method or questionnaire, (3) this research is related to the problems of social culture.

5. CONDITION OF RESEARCH OBJECT

The dwellers could be categorized into two types, the original citizen and immigrants. The original citizens are categorized as citizens staying in the area more than 12 years, while the immigrants are those staying less than 12 years. The immigrants whose number is in majority compared to the original citizens in general come from Kebumen, Purwodadi, Gombong, Wonogori, Sukoharjo, Purworejo, and etc. The immigrants residing near to the working areas, live near the city where wherever they wish to go, the transportation is cheap, contracting a house is also cheap.

5.1 Condition of House and Environment

The condition of the dwelling environment is very astonishing because its location is in the garbage disposal so that the condition of its environment has become untidy. But outside the location, the research is surrounded by housing complexes and factories.

In the western and northern areas there are real estates, in the south there are assembling factories for motorcycle casings and in the east, are the village dwellings and rivers.

The condition of the house is very simple. Most of the houses are semi permanent, i.e. about 5-70 cm of bricks and above with wooden plywood, the floor and ceilings using asbestos. The road to the dwelling environment is already concreted but already damage and with stones.

5.2 Job and Income

The people's daily living is working in the informal sector, which could be grouped into various types, i.e. food sellers including food stalls, private drivers, bricklayers, labors, scavenges and other jobs.

It is quite difficult to differentiate the original citizens and immigrants, because they respectively do not possess specific specifications. But, from the various types of jobs, the most found are private drivers, bricklayers and labors. Other type of jobs is ship attendants, scavengers and household

servants.

The income of the village people in Seruni in average is Rp 1,500,000. - Under. The income achieved one comma of five million rupiah, usually the people there receive additional income outside the permanent jobs. For instance, there is a “project”, where the project here is not only constructing a building, but the meaning of a project in the dwellings is loading and unloading goods at shopping centers and malls. Sorting goods from the scavengers or sorting used steel and iron is one type of job considered temporary and outside the main job called as a project. There is also9 additional income from contracting small rooms.

5.3 Community Activities

The daily activities (Mondays to Saturdays) of the community are concentrated at four places, i.e. at the working site outside the dwelling, house (lease) dam city. The highest frequency of activities is at the working site (63%), followed by in the house (20%), city (13%) and outside of the city (3%). Thus, the frequency of activities at the working site is continuously increasing, because a majority of the people there conducts activities outside their homes. While the activities on Sundays and holidays, the frequency of the activities are at home or residence because majorities of the people do their activities outside the residence or home environments.

6. ANALYSIS AND DISCUSSION

There is some analysis in understanding the existence of the dwellings, i.e.: (a) ways to obtain land and build dwellings, (b) ways to use the dwellings.

6.1 Ways to Obtain and Build Dwellings

The people illegally occupy the lands to live although they do not have any permission from the land owner i.e. PT H and PT X. The occupants said they bough their rights to use the land from their “local sub-district officials”. The locations of the boundaries in the ownership of the lands between PT H and X are at a road which they gave the name as Gang Belanda meaning Belakang Honda. The vacant land is cultivated by the indigenous people (Betawi).

The people occupying buy the cultivation rights of the land cultivated measuring 3 by 3 meters worth Rp 1,000.000 (one million rupiah)/ should they wish to occupy for residence, they must pay the sub-district office of Rp 500,000 and another Rp 500,000 for securities in 1999. Eventually, the price of the cultivate land became expensive where in 2002, rose to Rp 2 million

and in 2008, it reached Rp 5 to Rp 7 million per plot of land with the assumption of 3 x 3 meter, not yet including the construction. They build their house between Rp 5 and Rp 7 million. Installing electricity is lending the local people's ID (KTP) and the new occupants do not possess the local KTP.

The land or official letter as the sign of purchasing the cultivate land is only in a form of a receipt (quittance) place by a stamp and signed by the neighborhood head who also possess the cultivated land.

6.2 Ways to Use the Dwellings

Like other dwellings in Jakarta, they use their dwellings to overcome various types of needs. The way is by improving the function of their dwellings becoming contracted rooms or stalls. By using them fo9r contract, they will receive additional income which is sufficient compared to the capital used.
Factors supporting these among others are: (a) accessibility to reach and strategic, (b) location secured from flood, (c) a safe environment from crime even though within their illegal dwellings.

From these phenomena, it was observed there is a usage of the dwellings for contract. This case shows there are a number of symptoms in the increase of residential dwellings in the city easily reached and strategic. The usage of the dwellings for contract pushes other businesses such as food stalls and washing. This commercialization economically causes the citizens of able to retain there.

The place of socialization of the peop0le there is roads, small mosques and public toilets. Small mosques and public toilets were constructed by themselves and free of charge. Should there occur a damage of the buildings, there citizens will ask for tuition for repairs. There is an also an Islamic education center called TPA (Quranic Education Center).

7. DISCUSSION

7.1 Basis of Forming Dwellings

From the history of establishment, it was known that the existing illegal dwelling was because of the opportunity in constructing dwellings without through the official procedures. The pressure and the need for a place of stay and easy accessibility to reach the city have caused them to occupy the land. The occupation is made by paying the local officials.

The land is bought (according to them) from the local officials. The values that base that spirit are the feeling of unity between them. The unity is reflected from the cooperation and trust. Other factors supporting this are

among others: (a) the similar origin and view becoming their capital in building the dwellings, (b) there is no remarks from the government apparatus nor the land owner, (c) the pressing needs.

7.2 Usage of the Dwellings

Like other dwellings in Jakarta, they use their dwellings to overcome various needs. The way is improving the function of their dwellings for contract or stall. By using is for contract, they will receive sufficient additional income compared to their capital used. Factors supporting this are among others: (a) location of dwellings having accessibility easy to reach and strategic, (b) location safe from flood. (c) Secured environment from criminal actions within the illegal dwellings.

7.3 Building up Dwellings' Atmosphere

If we enter the dwelling, we could feel the people's living in harmony. Their families live in harmony and unity into one family. The atmosphere of the dwellings defeats the existing physical and economic limitations. With the learning area for children developed at one of the houses shows a unity maintained continuously. Factors support are among others: (a) a feeling of "rural" still brought by them becoming a capital to build a mutual environment, (b) one fate and one responsibility from their village, (c) various social similarities which unites their hearts and feelings.

8. SYNTHESIS

The first discussion discusses on the principal concepts HOTS as a dwelling which physically could be categorized as slums. According to Clinard (in Khudoiri, 2002) there are three slum dwellings characteristics, i.e.: there is behavior of deviation, (b) slum culture, (c) apathies and social lay up. From this discussion, it could be seen that illegal dwellings has a criteria as city community dwelling, among others: (a) location having the accessibility from the job location and free from flood, (b) the capability of the citizens could be achieved, both in obtaining and forming, (c) atmosphere of the dwellings is safe and pleasing supported by the harmony and unity, there is the Multi-function which could support the existence of the citizens such as the economic and social functions.

The second discussion, what values are possessed by the HOTS citizens? We could observe there is the social unity and trust between them. The participation level of the people is proven by the usage of spaces together and usage of private spaces. Crime could be said as none because

the people preserve and understand that it will become a loss for them. This is not categorized as a slum dwelling since the people has a high social value. This understanding brings further question how to mobilize the potentials in making better dwelling.

9. CONCLUSION AND SUGGESTION

This research has produced a conclusion that the values of humanity have become the basis for forming a space as more important than the space itself the saying “my house is my castle or my house if my heaven should mean that heaven is always in our hearts that forms this house. The spaces in the people’s hearts could for a walled space, having a ceiling and floor that protect their degree as a human. Such a space grows from the self-standing, existence and unity.

The slum dwellings actually have the potentials to be developed and having the contribution to solve housing matters and city economy. The government needs to find new ways in handling housing matters, and transfer a part of the resources for intensification and improving the housing quality including the slum houses presently ignored.

If the land will be functioned, the government or the land owner ought to think their presence. Evacuation without solution is not an action that needs to be undertaken. The suggestion for the research needs to be observing in a more proper way from the location specs or construction and other socio-spatial aspects.

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1 - 8

Growth of Urban Sprawl in Fringe Areas
(Case Study: Semarang City)

Bambang Setioko[7]

ABSTRACT

Rapid population growth in urban areas affects the transformation of global settlement. One of the phenomenal urban trends in the 21 century is a change city to metropolitan cities. By the year 2015 the United Nation predicts there will be 358 metropolitan cities, no less than 153 will located in Asia. Currently Indonesia faces urbanization tension. Statistics show by 2008 in the first time urban population reached 50.5%. At the year of 2020 is expected there will at least 18 metropolitan cities, including Semarang City.

Internal structure of metropolitan cities is different to small cities. Now a day's internal structure of metropolitan city have becomes extraordinarily intricate. Metropolitan city become an archipelago of enclaves. Urbanization has occurred in fringe areas, called peripheral urbanization. The role of central city decreases while fringe areas increase.
Semarang as a port and ex-colonial city just has been on the earlier stages of spatial and structural evolution. Under Dutch colonial authority, Semarang administrative boundary had been expanded three times, by the year of 1886, year of 1894 and year of 1902.

By the year of 1976 once again the city administrative boundary was expanded. The municipal administrative area boosted from 99, 60 km2 to 373, 67 km2, becomes the second largest city after Jakarta. The zone which lies between old and new administrative boundaries often called extended area or fringe area. At the last of 20st century, most of housing estate was located in this area. Sharp increase of motor cycle possession makes longer travel distances, greater freedom of choice destination and extends scale of accessibility. This condition triggered development in fringe areas. However,

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it can be said in general urban sprawl in Semarang is fuelled more by fast growing housing estate due to the big amount of housing supply.

The growth of fringe areas has dualistic character; formal and informal; and dominated by sprawl development. There are un-planned kampong, indigenous settlements and new planned settlements. Most of them are incrementally spreading, mixed and growth simultaneously.
Sustainable development means development which meets the needs of the present without compromising the ability of the future generation to meet their own needs. This principle becomes a main concept of housing policy and strategies, in order to reach sustainability of growth in fringe areas of Semarang city. Sweeping existing indigenous rural housing settlements and replace with new exclusive real-estate housing does not demonstrated proper solution which increases prosperity and sustainability.

Keywords: fringe area, sprawl-development, sustainability.

1. INTRODUCTION

In the global context, urban population growth has become a strategic issue. During the period of 1920 - 1980's world urban population increased by fifth fold from 360 million to 1.807 million people. By the end of 2000, the urban population reached 78 percent becomes 3.208 million. In the same period, urban population in developed countries rise up 300 percent, however urban population in developing countries increase nearly 1000 percent from 100 million to 972 million people. The United Nation estimate the urban population of the developing countries in the year of 2020 will reach 2.116 million people (Hauser, 1982).

According to Janice Pearlman (Firman, 1991), the increasing urban population percentage in the world follows four transformation phenomena of global settlements during 21st century. The transformation phenomena's are: [1] transforming from rural to urban. [2] Transforming from developed to developing countries. [3] Transforming from formal socio economic activity to the informal one. [4] Transforming from cities to megacities. The United Nation has been predicted by the year of 2015, it will be 358 million cities in the world and 153 million cities are located in Asia. Urban area development is very rapid and it grows horizontally, occupied rural surrounding areas. City has gigantic scale cover hundreds kilometres square and very hard to distinguish the border between rural and urban area, so it might be call "the borderless city".

Currently Indonesia faces urbanization tension. Statistics show by the year of 2008 in the first time urban population reached 50.5 percent. By the year of 2002, this share is expected to reach 61.68 percent. In 1971 only three cities were classified as metropolitan cities: Jakarta, Bandung, and

Surabaya. During 1990 - 2000, four other large cities expected to move up to the metropolitan classification. By the year of 2020, the total number of metropolitan cities is expected to be eighteen including Semarang city (Bulkin, 1995).

This paper will discuss and explore the trend of spatial transformation and housing growth in fringe areas with the awareness of experiences from developed countries. The main idea is deeply understanding of urban growth trend through the identification gradual change of urban form. The result could be taken into consideration to make physical planning in the future. Furthermore, this understanding will become a platform for effective urban housing policy on Semarang city.

2. URBAN SPRAWL IN DEVELOPED COUNTRIES

The growth on fringe areas of the cities is becoming world-wide phenomenon. Fast growing urban fringe areas occurred both in developed countries as well as in developing countries. It's a paradox phenomenon. Ever-expanding metropolitan region; that is most suitable occurred in the developed and wealthy countries; is often portrayed as an inevitable feature of large cities in the developing countries. As a matter of fact physical growth in fringe areas is dominated by sprawl development. Sprawl can be describes as un-planned, scattered, low density, un-structural development at the urban fringes. Urban sprawl linked to inconsistency of urban development strategy, social economy and democratization of society improvement and inequity problem. Anti sprawl reformers told that sprawl caused degradation of life and living environment. From economic point of view urban sprawl consumes valuable, limited land resources, including farm land and reduces food productivity. Sprawl also cost more than compact development. Urban sprawl was not only ecologically but socially destructive. In North America the declining centrality of urban core and increasing fringe areas has occurred in the most metropolitan cities. Statistical data of urban population density can explain that phenomenon. In US if current trends continue, about four-fifths of nation growth in the decade ahead will be living in suburbs (Gillham, 2002). During the period of 1960s - 1970s the white middle class migrate out of the city centre into the fringe areas, seeking safer neighbourhood and better environment. According to the 2000 census the phenomenon "white flight" has still occurred, making social, racial and income segregation more pronounced than ever before. Hal and Hay (1980) summarized the growth trend moving: [1] from larger to smaller metropolitan areas; [2] from metropolitan cores to fringes; [3] from urban to rural areas; [4] from older manufacturing areas to newer service areas (Kivell, 1993). When suburbs were booming and urban core seemed to be collapse, inner city was portrayed as poor and filled with minorities lived in shanty towns. In the contrary fringe areas describe as being white

and affluent. Gentrification at the urban core and sprawl development at the fringe areas have been flipsides of the same coin.

3. PHYSICAL GROWTH OF SEMARANG CITY

History of Semarang starts on 1547 AD as a trade and port city. At this time the city of Semarang still a small city, consists of several groups of indigenous Javanese settlement, Chinese settlement and a Dutch fortress. In this early period Semarang population growth rate was insignificant. At the mid of eighteenth century Semarang flourished as an entrepot of exported commodities from outer island to be sent to foreign countries. Many foreigners such as Dutch, Chinese and East Asian people (Indian and Gujarat) migrated to Semarang for trading. As a result the city grew very fast, and Semarang becomes the third largest harbour on Java Island. Under Dutch colonial authority, Semarang administrative boundary has been expanded three times, by the year of 1886, year of 1894 and year of 1902 (Colombijn, 2005).

The city economic development had created dense residential area in urban core surrounding Regent's (Bupati) palace. The city centre was still the Dutch quarter (now namely Old City) equipped with luxury urban amenities with elegant urban design resembled of small city in Europe. On the contrary; the area of indigenous Javanese, Chinese, and Arab settlement sprawled along Mataram Street; were lack of urban facilities and urban amenities. The inhabitant lived in scattered slums houses, had narrow and disordered dirt paths. At that time those areas were considered as villages on fringe areas.

By the year of 1901, urban disaster was occurred. Many diseases such as dysentery, typhus, cholera stroke the slum areas caused many victims (Liem, 1933). Ethical movement and high mortality rate forced municipal government change strategy of city development. Physical growth of the city directed to the hilly area in the South named Nieuw Tjandi (Candi Baru); avoid swampy area which lies in the North. Ir.Thomas Karsten, person in charge as advisory for Semarang city planning change radically the old concept of racial separation that divided former urban settlements into Dutch, Chinese and indigenous Javanese districts. In his new concept, Thomas Karsten divided zoning area base on economic classes rather than ethnic segregation. But in fact the three ethnic groups were also divided into three economic classes. The Dutch and a few rich Chinese were in the highest economic class, in the middle-class category were Chinese and the majority of the Javanese were in lowest class category (Pratiwo in Colombijn, 2005).

After independence, Semarang city becomes the capital of Central Java Province. By the year of 1976 once again the city administrative boundary

was expanded. The municipal administrative area boosted from 99, 60 km2 to 373, 67 km2, becomes the second largest city after Jakarta. However, Semarang city still does not have an advance level of growth, with the growth rate of 1, 41% over 2007. By the year of 2008, the built-up area is only about 36% of the entire municipal administrative area, and the net density is about 108 inhabitants per hectare. The zone which lies between old and new city administrative boundary mostly has rural characteristics. This area often called extended area or fringe area. At the last of 20st century, most of housing estate was located in this area. One of several reasons this phenomenon triggered by sharp differentiation between land price in urban core and urban fringe. In addition sharp increase of motor cycle possession makes longer travel distances, greater freedom of choice destination and extends scale of accessibility. This condition triggered development of remote areas in country side. Due to the lack of land pricing policy, detail planning and law enforcement, the growth of fringe area was dominated by sprawl development

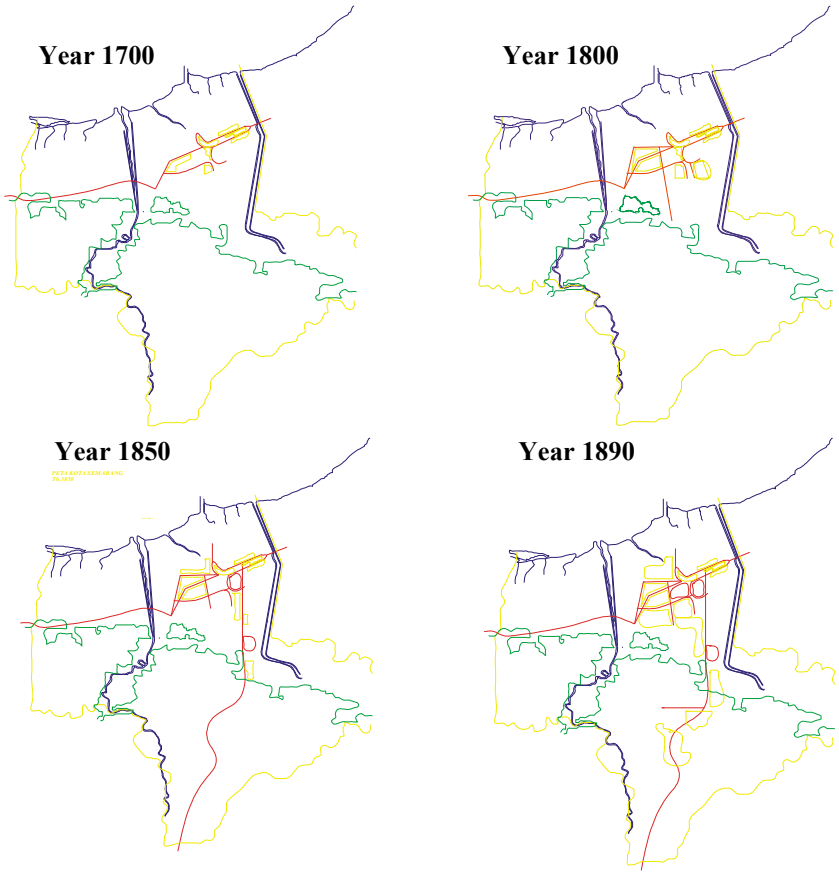

Figure 1. Map of Semarang City year by year
Source: Local Planning Development Agency (Bappeda Kota) Semarang

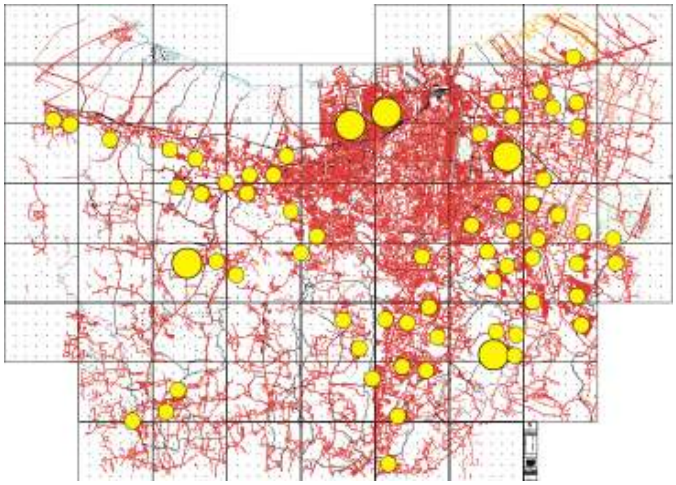

Figure 2. Map of Semarang City and the Location of Large Housing Estates areas
Source: Local Planning Development Agency (Bappeda Kota) Semarang

4. SEMARANG URBAN FRINGE AREAS

According to the study conducted by the "Department of Human Settlements and Regional Infrastructure" (2003) for urban and suburban areas of Semarang city, it can be said generally urban sprawl in Semarang is fuelled more by fast growing housing estate due to the big amount of housing supply. Based on statistical data of 2007 the population in city centre has negative growth rate while in urban fringe has high percentage. The condition demonstrates parts of inhabitants move from city centre to fringe areas. For five years (2002-2007) the population who inhabited city centre tended to decreased and urban fringe increased.

Comparing to other metropolitan city, building density in city centre is low category. City centre and fringe areas are grew simultaneously. Unstructured urban sprawl was scattered in fringe areas like archipelago of enclaves. Physically fringe areas consist of many types of settlement. Planned settlement developed by housing estates mostly occupied by middle and high income groups equipped with luxury urban amenities. In the contrary indigenous rural settlements grow in natural pattern lack of urban services and are categorized as un-planned settlement. Both settlement lay side by side. It can be said that fringe area has dualistic characteristics, a mixing between planned settlements and un-planned settlements. Un-planned settlements have informal and traditional characteristics inhibited by lower income class; however planned settlements have a formal-modern

characteristic inhibited by high income class. They are growing simultaneously.

Even though urban fringe has rapid growth municipal authority cannot gives enough attention yet. At present municipal authority do not have enough financial resources to improve basic infrastructure and municipal services to adequately meet the rapidly demand. Limited budget is a big constraint to build urban infrastructure and urban facilities in fringe areas. Most of budget proposed for city centre development and maintenance of old urban infrastructure.

According to the study held by Mustaqin (2002), most of inhabitants depend on city centre services, especially shopping facilities. These low income and poor groups contribute to forming new shanty areas without access to basic services such as water and sanitation, and at risk from environmental hazards such as floods and landslides.

5. CHALLENGES FOR SUSTAINABLE CONCEPT OF HOUSING POLICY IN SEMARANG URBAN FRINGE AREAS

The growth of fringe areas is inevitable phenomenon. It appears that urban sprawl in fringe areas has been a feature of urban life of most metropolitan cities in developed countries as well as in developing countries. Urban sprawl, like everything about the growth of cities, is very complex. This phenomenon becomes urban trend in this century. Experiences in developed countries clearly show how the anti sprawl concept; such as smart growth, urban growth boundaries, edges city etc; can't successfully prevent rapid growth of urban sprawl in fringe areas.

Unlike North American cities, urban sprawl in fringe areas of Semarang doesn't triggered social and racial segregation. The fringe areas are a mixing place between planned settlements and un-planned settlements. It has dualistic characteristic. They are growing simultaneously. The statistical data published by Local Development Planning Agency of Semarang City shows during the period 2002-2007 population in fringe areas increase remarkably in the contrary city centre has negative percentage growth rate. Most of new inhabitants lived in fringe areas coming from city centre districts.

According to the geological study held by Ir. Muroji (2005) the ground level of city centre will decline 1 cm per year caused by land subsidence. By the year of 2025 two third of city centre expected will go down below water sea level and suffered form environmental hazard like tidal flood which strike once a month. If municipal authority does not anticipate this kind of urban disaster in short period most of city centre area becomes shanty areas. Such condition force people moved out of the city centre to find better living

environment and cheaper land. Part of the city area which match to the hope of inhabitants only available in fringe areas.

According to the World Commission of Environmental Development, sustainable development means “development which meets the needs of the present without compromising the ability of the future generation to meet their own needs”. (WCED, 1987).

This principle becomes a main concept of housing policy and strategies, in order to reach sustainability of growth in fringe areas. The rapid development of housing estate in fringe areas should be reduced and development of un-planned settlement (indigenous rural settlement) has to stimulate. So the balance growth of social structure will develop naturally. Balance growth will shape social structure. Jenks (2002) implied in his book that urban form as the spatial configuration of social structure. To sweep existing indigenous housing settlement and replace with new exclusive real-estate housing does not demonstrated proper solution which increases prosperity and sustainability.

Comparing to other metropolitan cities, Semarang has low population density. As far as net density in city centre are low, infill development could be easily launched.

6. CONCLUSION

From the discussion above, we can conclude that:

- The development of city’s role from ex-colony port-city to regional primary city in Central Java, stimulate transportation network and changing urban form of Semarang city from compact city becoming spread city. The preview internal city’s structure which is very simple, now a day’s turns into intricate.
- After independence era, human settlement grows to the South and to the East, follows the growth of road and transportation network. The fast development of urban fringe areas is dominated by the housing estate, but the net density of urban centre is still low.
- Gentrification process has been occurred in the preliminary phase. Since urban centre gradually becomes shanty areas caused by land subsidence, inhabitant who lived in urban centre areas tends to move out of the city centre to find better living environment in urban fringe areas. This process is supported by the increasing a large amount of new housing estate where located at fringe areas. The main activities at urban core have been move sporadically and incrementally to fringe area.
- The urban fringe area is dominated by sprawl development and it has dualistic characteristic, a mixing between planned settlements and un-planned settlements. Un-planned settlements have informal

and traditional characteristics; however planned settlements have a formal-modern characteristic. They are growing simultaneously.

- Improving social cohesiveness is better solution to shape balance of social structure. It will minimize the destructive aspects of sprawl development. To sweep existing indigenous rural housing settlement and replace with new exclusive real-estate housing does not demonstrated proper solution which increases prosperity and sustainability.

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1 - 9

Upgrading of Traditional Housing on Waterfront Areas : a Case of Legality and Tradition

Slamet Budi Utomo[8] & Josef Prijotomo

ABSTRACT

The culture of living on waterfront areas (on river banks or seasides) has been part of the culture of some Indonesian communities. Such community can be found a lot in Sumatra , Kalimantan, Sulawesi, East Nusa Tenggara, Maluku and Papua, and has been a tradition from generation to generation. The housing consists of blocks of houses built the whole part on land close to water, or partly on land and partly on water, or all part on water. Bajo Village and Bugis community are two examples of such communities. In most cases, waterfront traditional housings are characterized by their slummy living condition that need upgrading through revitalization. The fact that the housings are built on water has created a legal problems. The community settlement law illegalized such housing on such areas. And in fact most of the houses are constructed on area that should be freed from any building. The fact shows a contradiction. On one hand the housings are considered illegal and hence should be cleared, but on the other hand, they reflect a unique aspect of certain culture that need to be preserved and considered as asset to the local culture. This paper tries to analyze the controversy that triggers the contradiction between the law enforcement and the cultural preservation.

Keywords: Legality and Tradition, Traditional Housing on Waterfront Areas, Upgrading

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1. THE BACKGROUND

The growth of a town usually begin on the waterfront area, especially those town that are now located on the riverside or seaside . The growth is motivated by the need to do barter trading in an agreed location which later expand into a trading site. The settlement grow due to market activity and the anchoring area for boats that transport the merchandise. In the beginning only few housing were built around the area. Later the small community gradually expand. The expansion create the need for public facilities and amenities such as prayer house, school , markets, social and recreation area.

The growth of such waterfront community is closely associated with its early days. The waterfront areas were chosen as their settlement areas because they were their work place. The areas were chosen for practical reason.The traders who use boats as their method of transport always prefer waterfront areas (on the seaside or on the riverside).

The development of towns on the north coast of Java always begin on the waterfront areas. Semarang, Tuban, Cirebon, Jakarta or Surabaya are example of such town that owe their start at the riverside. In Kalimantan, the rivers play an important role in the development of such town. River Barito, Kapuas , Mahakam are major rivers which contribute substancially to the history of its town development. Community settlement on riverside in Kalimantan are commonplace. *Rumah Lanting* (Lanting House) or floating market in Banjarmasin are typical building whose existence is related to river or water.

The consequence of such development are the creation of build up area along river banks in form of housings , trading and service areas, or office quarter. The limited areas along the river gradually causes dense and crampy quarter. Without strict control the areas inevitably turn slummy and the environment quality degrades. Some towns that date back a long time and become part of their history are now a dense slums with serious environmental degradation. They create a dilemma . On one side they should be revitalized but on the other they are old and have become part of the history of its development. .

2. THE CONDITION OF RIVERSIDE SETTLEMENTS

To have a close look at the condition of such settlements, consider Marabahan Town and the areas in Simpang Empat Batulicin Town. They reveal typical condition of riverside settlement in South of Kalimantan. Marabahan Town, In Marabahan Subdistrict - Barito Kuala Regency are

located on the convergence of 2 rivers, Barito River and Negara River. Whereas settlemens in Simpang Empat areas, in Batulicin on the sea side of Laut strait. They are ones of few such riverside settlements on Barito River. Marabahan Town, are typical settlement that represent certain image of Banjar and Dayak Bakumpai community. The settlement along the river bank are old settlement with unique type of building and are living history of its town development.

Figure 1. A condition of a riverside settlement in Marabahan Town - Barito Kuala- South Kalimantan.

Waterfront settlement in Batulicin Town is typical Bugis community in Sulawesi who emigrated to Kalimantan for new lives. The community which quite big in number spreads over South and East Kalimantan The existence of Bugis Community is evident of the glorious marine consciousness of their anchestor that have characterised Bugis people. Areas of Bugis settlement in Kalimantan are further proof of the marine consciousness of the Indonesian community across Nusantara for generation. The significance of such community (as landmark of the ancestor of the Indonesian People) compels the preservation of the areas as historical site.

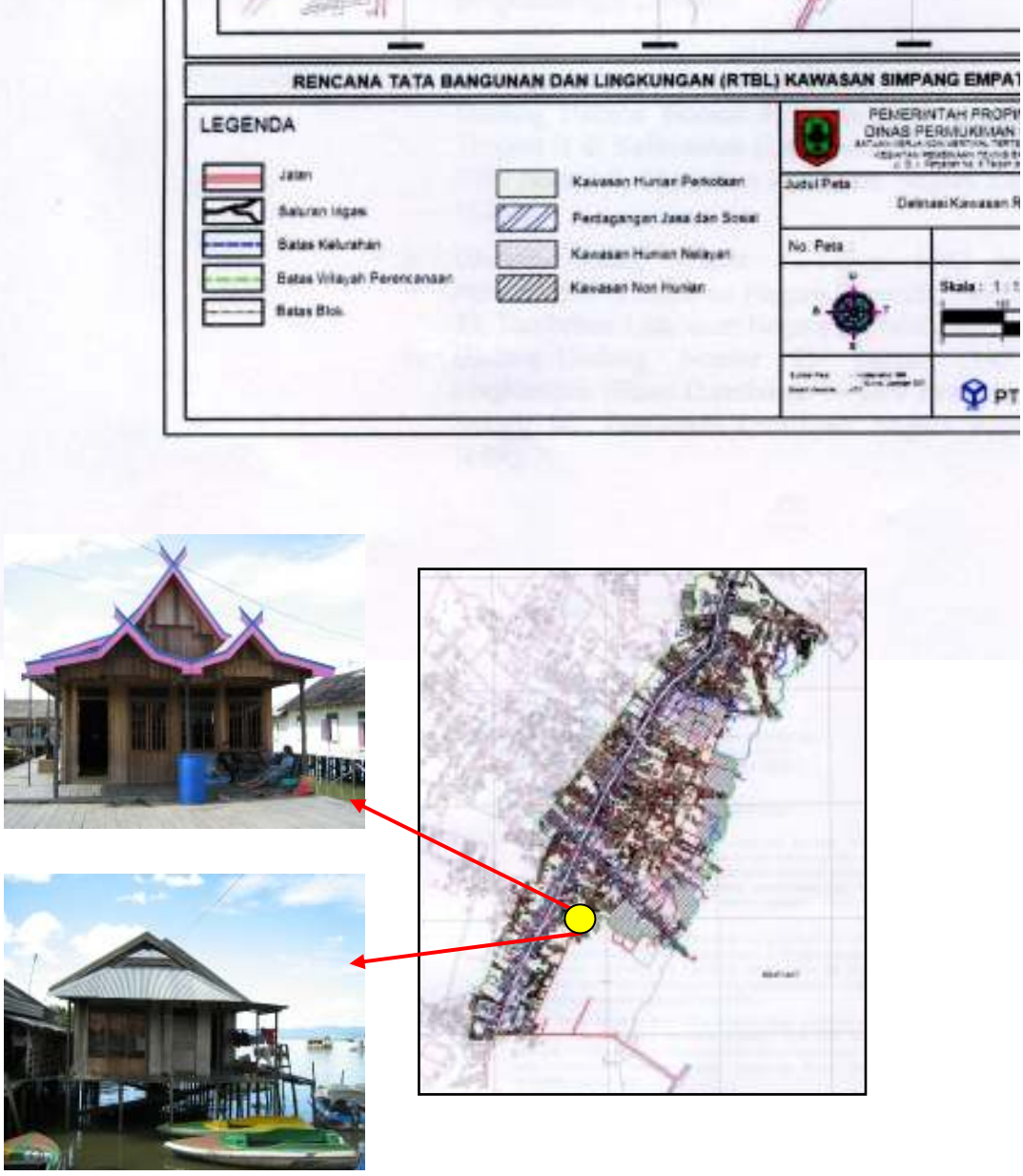

Figure 2. A condition of a riverside settlement in Batulicin - South Kalimantan.

The condition of the settlement areas of Batulicin is more or less similar. Some buildings even jot far into the water and there is a tendency that they will go even further . New facilities have emerged, such as river ports, markets, shopping areas, schools, or religious houses. With lack of control the areas have been transformed into slummy and dense areas. New problems emerge from the question of building legality of the buildings

that jot into the water to problems of utility (flood controls, minimal clean water availability, bad sanitation, and power supply inadequacy).

2.1 Potential and Problem on Waterfront Areas

In view of the two areas above, the potential and problems can be summarised as follows.

The potentials :

- Economic Potentials : the areas can be developed into an economic centres due to their strategic location on the main roads or riversides and the availability of market places.
- Tourism Potential : the typical environment and the river views as the main attraction and orientation.
- They have potential to project the typical image and identity with its old and historical nature and the riverside offer exclusive view

The Problem that can arise :

- Inadequate control render the areas to become dense , crampy , slummy,and causes the the environment quality to degrade.
- The insufficient and the below standard service of public places increase the slumminess.
- The improper maintenance of the areas create uninteresting and unattractive view of the river.
- The inadequate availability of open spaces causes the Green Area Coefficient rate to go dawn.
- The dense and cramped between building causes the building and environment condition to be unhygienic
- The ecosystem quality of the riverside areas degrade due to building activity along the river banks. It further deteriorate due to human activity and building misuse.
- The people perception on the rivers have changed and the interest in them have declined. The rivers are no longer considered important and meaningful (physically nor spiritually).

3. THE GROWTH OF RIVERSIDE SETTLEMENT

The embrio of a new town is usually the centre point on a seaside or riverside settlement from where it start to grow to become a town. Business centers that expand around the site is the embrio of a trading centre and the centre of town and as a result so it becomes considerably strategic area. The strategic location increases the economic value. Therefore a square meter size of land is of an enormous value. Almost all possible space and

land on the centre of growth are filled with all sort of buildings with a variety of urban activities.

The existence of areas which is the embrio of the future town is pressed amids new buildings around it. New buildings that are built later filled the area along the river bank. Gradually the areas become dense and its quality degrades. This condition is further deteriorated by the activities of the people who inhabit the areas along the river banks. Their activities often expediate the destruction of the environment on the riverside physically or visually. Some of the activities that contribute to the degradation of environment are :

1. The disposing of liquid waste into the river without prior treatment
2. The disposing of solid waste into the bank unscrupulously.
3. The construction of building on the river banks without allowing any space between the buildings and the waterline.
4. The construction of buildings or the activities that are merely for economic purposes and neglecting the environment factor.
5. The people perception on the river or sea is that they are no longer as sacred and respectable as they used to be.
6. Worship to the sea as shown by the ritual activities and traditional ceremonies are carried out for tourism and economic purposes and is never considered as important part of the local cultural system and value.

The above phenomenon must be dealt with immediately before the condition deteriorates further. The immediate action taken can improve the environment quality either physically or visually.

4. THE CONFLICT IN THE REORGANISATION PLAN OF THE WATERFRONT AREAS

Local Government have reorganized the waterfront areas by way of elaborate and detail landscape planning in micro or macro scale. The formal term of which are RDTRK, RTRK, or . RTBL All are conducted in an effort to improve the physical condition of the corridor of the water front areas.

In general, the plans made for the waterfront areas are all about the imposition of the sign of boundary either on riverside or sea side. The width of each ‘free area’ are imposed with certain standard . The area within the sign of boundary that can be utilized are termed as Green Open Space or Inspection Road. They both serve as ways to maintain the condition and quality of the area along the corridor of riverbank or riverside.

Maintaining the quality and condition constitute making effort to maintain the ecosystem for sustainable development for the future. In

addition , the effort can also be in form of the improvement in condition and quality of the existing environment (including the housing) and the visual aspect. The improvement of the existing environment are carried out by improving the infrastructure network and system. And for the visual aspect improvement are carried out by allowing more Green Open Space, and more parks and by improving external space element.

The imposition of the sign of boundary for seaside and riverside compels the demolition of building considered breaching the regulation. And if it is not done in proper manner it will bring serious problem . Some building which are historical and are cultural asset of the local people have to be demolished as well. If that happens the tracks of history will disappear.

The settlement which are most likely to be demolished by the sign of boundary regulation if it go into effect are settlement commonly found in certain area in Indonesia (Kalimantan, Sumatra, Sulawesi). They are likely to be demolished because many of them are built partly on land and partly on water . A question is raised 'should they be demolished simply because they breach the sign of boundary regulation ? The risk is that people will loose a type of settlement which truly special and unique to certain ethnic group in Indonesia. It may not be easy to deal with. There should be a special treatment in the enforcement of the sign of boundary regulation for those waterfront areas.

In the final discussion of landscape planning the existence of building on waterfront areas often trigger moral conflict between the need to impose legal rule on sign of boundary for riverside or seaside and the need to preserve the historical significance of the area and their uniqueness. It is best that the imposition of sign of boundary regulation only affect the new settlement area or areas that have no significance in term of history or it doesn not posses any uniqueness therefore in the initial effort prior to the upgrading process There should be special study to judge whether certain areas need to be demolished or preserved. The study should use the social cultural perspective in deciding which areas are considered unique or special to be preserved.

5. CONCLUSION AND RECOMMENDATION

In conclusion it is imperative to reiterate that in enforcing the regulation on sign of boundary on riverside or seaside, a special study is needed to tackle the problem that may arise in the demolition of building. It is only proper that for every building that breaches regulation of sign of boundary on riverside or seaside should be demolished. However areas that have special significance (e.g. traditional settlement on waterfront areas) need to be

treated with a special policy of demolition, in the effort to preserve local uniqueness.

Some recommendation for dealing with the areas :

1. Settlement on waterfront areas is recommended to be preserved and should not be developed based on new pattern in expanding the areas. To avoid expantion, a physical boundary between Settlement areas and the river or sea should be built Physical boundary can be in form of walking path made from wood that separate the housing areas with the river or the sea (*Jalan Titian*),
2. Make the best use of the area as preserved or conserved area or as tourist destination (Marine Tourism),
3. Formulate a concept of maintenance using participative model. The economic benefit gained by local people from tourism can create participative consciousness in maintaining and preserving the seaside or riverside environment for sustainable development in the future.

Figure 3. An illustration of a reorganised riverside \ seaside area. A walking path as physicalsaperator between the living area and the riverline

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1 - 10

The Influence of Displacement to the Success of Sustainable Multi-storey Housing Development for Low Income Society in Urban Area

Case Study: Multi-storey Housing in Jakarta

Nina Nurdiani[9]

ABSTRACT

Multi-storey housing for low income society is a concept of redevelopment from many alternatives of housing development for slum in Jakarta. However, redevelopment directly or indirectly leads to displacement of lower-income residents. The new residents would be of a higher socio-economic status than the previous occupants. For controlling this phenomenon, a study about the influence of displacement to the successful of sustainable multi-storey housing development for low income society has been done with descriptive method, observation and literature study. The result of this study give knowledge that displacement always happened when the quality of building and environment is better, the location of multi-storey housing is near center city and commercial area. Low income society voluntary displaced their units to middle or high income society, because they are not affordable for paying operational and maintenance costs. The government have to make regulations for controlling displacement on multi-storey housing for low income society and for the successful of sustainable high rise housing development in urban area.

Keywords: displacement, housing development, low-income society, sustainable multi-storey housing, urban area.

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1. INTRODUCTION

The most oft-cited definition of Sustainable development was coined by the WCED: Sustainable development is an environmentally sound development strategy that "seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future" (WCED 1987, 40). Hardoy, Mitlin, and Satterthwaite (1992) have helped clarify the components of sustainable development by distinguishing social, economic, and ecological dimensions (see figure 1).

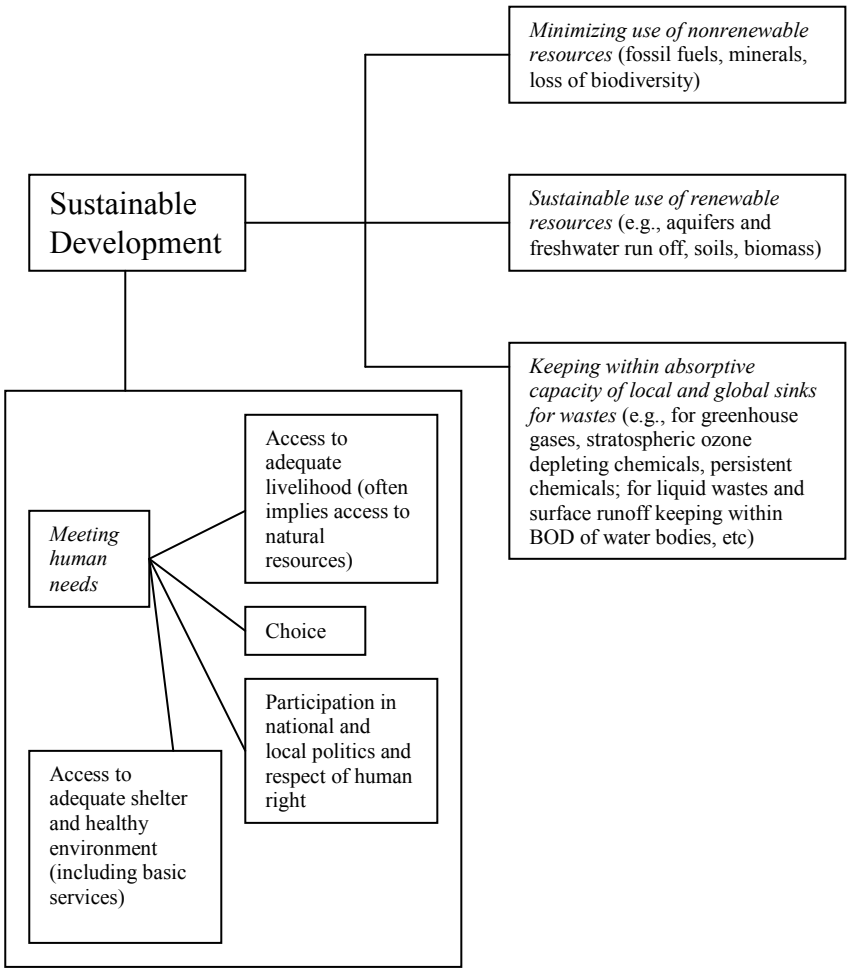

Figure 1. Components of sustainable development

Based on the components of sustainable development, focus of discussion in this paper is social dimension, particularly to provide high rise housing for low income society. So, the goals of sustainable development to provide resources for present and future can be realized.

Sustainable high rise housing development is development of multi-storey housing which every one can access to housing and their live increasing gradually both social and economic condition. It also include increasing quality of multi-storey housing and its environment which attention and care to ecological principal, which implemented in multi-storey housing environment.

Jakarta as a city of governance, economics and service at Indonesia, until currently is still the main aim of immigrants. They look for the better living and increase their welfare level. On its process, this immigrant evoke social problem, notably housing. Immigrant society that is largely low educated makes them become a society who gets low production at Jakarta with remained cultural village, and live in human settlements at downtown (city kampong).

Now, multi-storey housing is one of alternative which be developed at urban area for low-income society since 1980. multi-storey housing has been looked on as one of best alternative, because urban land that progressively getting scarced, urban population that increases progressively and housing at urban area is also still so scarce, notably for low income society.

According on Law no.16 / 1985 that multi-storey housing is multi-storey building with logistic dwelling that is built in order to meets the need of housing for low-income society. Definition of high rise housing is:

- multi-storey housing is multi-storey building in an environment, which is divided in parts that functioned horizontally and vertically, that each could be owned and utilized separately, especially for dwelling that is provided with parts of totality *(Law no. 16 /1985 section 1 about high rise housing)*.

- multi-storey Housing is multi-storey building that contain individual ownership system and common rights, that its purpose for dwelling or multiuse, not only separately but also coherent. *(Local government of DKI Jakarta, 1997).*

On its developing, multi-storey housing at Jakarta, tend to process displacement until 80% (Tempo, 2004), which happens from original owner to other one that needs the house through merchant system (for example type 21: IDR 65.000.000 and type 54: IDR. 80.000.000) or rent system (IDR 1.500.000 / month). So occupants finally are not target group. Characteristic

and occupant social strata of society changed from low income society become middle to high income society. Unit of high rise housing that originally as social goods changed as trade goods (commodity) for sale or for rent. The facilities of high rise housing finally are not suitable with new occupant requirement.

To control this phenomenon, therefore needs a study about process of displacement, particularly in Jakarta. Study which is done with descriptive method base on observation and literature study, discuss how much displacement on high rise housing happened, locations where displacement dominant happen, and how it influence success to provide housing for low income society in urban area.

Result of this study can give description or recommendation for controlling this phenomenon, even been expected can avoid this phenomenon. This Paper constitutes preliminary study from dissertation research about displacement phenomenon on multi-storey housing. This study is required because it will influence success to provide housing for low income society in urban area.

2. THE DISPLACEMENT ON MULTI-STOREY HOUSING

Displacement on multi-storey housing is someone transfers of its dwelling originally or individual ownership rights to new occupant or user. Displacement is a situation in which an incumbent resident is forced to move. Typical examples are when assisted units are demolished and replaced by market units, when the in moving higher-income households drive rents up to a level that incumbent lower-income residents can no longer afford, or when an absentee landlord sells the property to a higher income household that converts the unit to owner-occupancy (Salama, 1999). There are even broader definitions of displacement that include when a lower income household is unable to move into a unit in a neighbourhood that is gentrifying because of increased rent levels or the loss of affordable housing stock (Kennedy and Leonard, 2001).

Base on description above, displacement process can't be escaped from housing market mechanism, and it related with social-economic conditions and culture conditions of society, urban growth, and infrastructure development. These figures below give a description that displacement phenomenon on high-rise housing happened at locations with same characteristic, and give information social–economic status of new occupants.

Figure 2. Usage of air conditioning (AC) and function change at dwelling unit, a lot of luxurious car parked around multi-storey housing – Jakarta.
This is actually provided for low income society, but now changed ownership become middle and high income society

Figure 2 gives information that the middle to high-income society interest to ownership or dwelling unit at high-rise housing which necessarily provided for low-income society. The facts of it can be pointed out clearly with a lot of usage of Air Conditioning (AC) on dwelling units, a lot of car which has been parked around high rise housing area every day, even until luxurious vehicle also available. The function of public open space and sport area is changed become facility for car parking. People and children in multi-storey housing finally no have place for playing and interaction between them.

Displacement phenomenon happened not only in Jakarta, but also in other countries. Like at American Cities, Koebel (1997) has done research about displacement in America. Koebel said that:

> *Private redevelopment without public assistance for land assembly has mainly occurred on "choice" parcels in selected neighborhoods, potentially leading to displacement through gentrification.*
>
> *Unlike urban renewal, which directly leads to displacement, private redevelopment displaces previous residents indirectly through "gentrification." By their own choice, home owners opt to sell their properties, and voluntarily relocate. Tenants, who often predominate in such neighborhoods, are displaced through conversion of properties to owner occupancy or increases in rents beyond their means. Depending on the availability of low rent housing elsewhere, these tenants might not be able to obtain affordable housing after being displaced.*

Gentrification happens when newcomer enter housing region, which take in changing quickly, particularly in social and economic aspects. It can influence the change of environment physically, visual and functional.

Gentrification results positive impact on one side, and negative impact in other side (Lang, 2004). The positive impact is an increasing environmental quality at housing or multi-storey housing, increasing economics, raising land value and property price. The negative impact is an increasing of housing displacement. It can cause occupant with low income displaced their house because they are not affordable to pay maintenance cost and operational cost.

Redevelopment in Indonesia through high rise housing development improved the quality of environment. The aim of this development is also to improve occupant life quality as low income society. But in the process dwelling, original occupants tend to displace their dwelling unit because of not affordable (Siregar, 2000). So, the government has to make regulation to control this phenomenon.

3. THE INFLUENCE OF LOCATION TO HOUSING DISPLACEMENT

Determination locations of high rise housing in urban area for low income society, really determine its success. Low income societies tend to live in city kampong that usually close to city center and their workshop in informal sector. They give service to middle and high income society

Economic activities, both formal and informal sector will always available and mutually need in Jakarta. The location of formal activities such as working in the office, shopping, etc is near the city center or at the heart downtown on strategic locations. The employee in formal sector is people who have middle-high level education and income. Informal sector as the activity which services formal sector is an activities which usually is done by low level education and income. The process of mutualism's symbiosis among formal sector and informal can give thinking for housing development at urban area, especially in Jakarta.

Of course, they need a dwelling unit near their workshop and affordable by their financial condition. They will buy or lease the unit of housing at urban area in order to efficiency in time and energy. Therefore, they hope that their live will be better.

Table 1 below shows the result previous survey about high rise housing locations. It is found the locations of high rise housing displacement in Jakarta always near city center and downtown area, near commercial area, industry and offices. The locations also have accessibility to public transportation. Impact of this conditions influenced land price and maintenance cost in this area which become very expensive or not affordable by low income society. Displacement on high rise housing happened about 50% - 65%. Middle-high income society is interested to high rise housing in this location.

Table 1. Percentage of displacement on multi storey housing and location

Multi-storey Housing	Displacement (%)	Social – Economic Status	Owner (%)	Tenant (%)	Only have one house	Location	Accessibility
Pasar Jumat	59,4	Middle High	34,4	65,6	62,5	South Jakarta	High
Kemayoran	60,1	High	-	-	-	Center Jakarta	High
Bendungan Hilir I	38,1	Middle High	42,9	57,1	45,2	Center Jakarta	Medium
Karet Tengsin	50	Middle High	63,2	36,8	71,1	Center Jakarta	High

Source: Siregar, 2000

4. THE INFLUENCE OF DISPLACEMENT TO THE SUCCESSFUL OF SUSTAINABLE HIGH RISE HOUSING FOR LOW INCOME SOCIETY

The providing good dwelling can influence the successful of sustainable high rise housing from social dimension aspect, particularly if low-income societies can easy access housing ownership.

Base on government's data that until now housing supply at urban area in Jakarta only focus on providing housing for middle-high income society (see table 2). This can be seen of growth of real estate at West Jakarta (45.217 units) and North Jakarta (38.131 units), development of apartment or condominium at South Jakarta (21.343 units) and Center Jakarta (28.149 units). High-rise housing is only 21.898 units in Jakarta.

Table 2. Distribution of multi-storey housing in Jakarta

Areas	High Rise Housing		Real Estate		Apartment / Condominium	
	Location	Unit	Location	Unit	Location	Unit
South Jakarta	3	520	18	14.773	55	21.343
East Jakarta	13	5.021	19	6.183	4	3.679
Center Jakarta	10	7.278	-	-	40	28.149
West Jakarta	5	3.932	31	45.217	14	6.317
North Jakarta	9	5.147	27	38.131	12	12.006
Total	40	21.898	95	104.304	125	71.494

Source: BPS Jakarta, 2007

Housing supply for low-income society was not appropriate if as compared to housing requirement for them as dominant immigrant in Jakarta. Housing development that arranged for middle income society also was not yet programmed clearly. They can buy a house at real estate, but its location too far from downtown of Jakarta. They are ready to stay in apartment or condominium, but they are not affordable to buy or lease in there. So, they take over settlement which is provided for low income society through displacement the unit of high rise housing from previous occupant to new occupant.

The strategies that can be implemented to control this phenomenon do the efforts as follows:

1) Controlling of ownership and displacement on high rise housing for low income society through regulations from government
2) Giving subsidy for development and preserve high rise housing for low income society.
3) Tight selection in the early settlement arranges.
4) Counseling and socialization how to stay in high rise housing.
5) Improving management strategy of high rise housing for low income society become affordable for them.

5. CONCLUSION

Multy-storey housing displacement always happened when the quality of building and surrounding is improved; the location is near center of city and commercial area. The low-income society displaced their units and giving them for middle or high-income society, because the operational and maintenance costs are not affordable for them. The government must have regulations to avoid high-rise housing displacement occur and for the success of sustainable high-rise housing development in urban area. Housing development for low-income society related to many factor, such as social-economic, regulation, land value, location and physical conditions of high-rise housing and its environment.

This paper has not been perfect. However, it will give good contribution for understanding displacement phenomenon. The objective is to develop high-rise housing for low-income society at urban area.

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Comprehensive Exploration of Public Space in Informal Settlement as a Tool for Sustainable Development Strategies

Dr. –Ing. Ir. Paulus Bawole, MIP[10)]

ABSTRACT

As a human being the poor, who live in informal settlement has also a right to live better than any other well-off persons. Even though the government regards them as illegal, they demonstrate great ingenuity in developing their residential neighbourhoods especially in organizing the open spaces and construction of housing. To regard the poor not as a problem but as a solution requires a great honest heart, because it is quite difficult to appreciate the poor activities and creativities positively. Through understanding the daily life of the poor in informal settlements including their backgrounds, all individuals and institutions are able to be aware that such settlements have special characters which can be explored for generating the development strategies.

Sustainable development strategy for informal settlements can be carried out well, if the inhabitants are involved from the beginning of the process up to the implementations. Public spaces are the living room of the informal settlements - the place where people come together to enjoy the settlement and each other. Public spaces make a high quality life in the settlements become possible - they form the stage and backdrop to the drama of life. With exploring the effectiveness in using public spaces within the informal settlements, a strategy of urban upgrading in informal settlements without destroying the existing settlements can be carried out very well.

Key words: Informal Settlement, Space, Sustainable

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1. INTRODUCTION

In informal housing areas poor people develop their houses first with very simple materials such as pieces of cardboard, plastic, bamboo or wood. During certain times the housing area along the riverbanks grows spontaneously. Because the environmental quality within this area is poor, the government implements revitalization programs which often gets rid of the spontaneous settlements and move the people to other areas. Sometimes if the people refuse to move, the government forces them by burning or bulldozing the settlements.*(ACHS, 2003)* Since they cannot afford the price of formal houses developed by the government or private developer, they will try to find another vacant area and then build again their huts informally. According to the experiences explained above, It shows that to demolish the informal settlements does not solve the problems, but it stimulates the growth of informal settlements in other areas.

There are many definitions of a squatter settlement or informal settlements. It depends on a variety of defining parameters used in many different countries. In general, it is considered as a residential area in an urban locality inhabited by the very poor who have no access to tenured land of their own, and hence "squat" on vacant land, either private or public. (Srinivas, 2008) In all informal settlements the inhabitants live without having a legal land certificate and building permission for their houses. Nevertheless there are many families, who pay retribution to local government in regard to their living in the area of local government. Therefore they have objections and do not agree, if the government or other institution says that they squat the vacant areas within the cities, because actually the local government knows that the poor and their informal settlements exist in parts of their city.

In 1948 the United Nations declared Universal Declarations of Human Right. With those declarations the United Nations hoped that the world situation including the human right could be improved very well. In reality there are many problems with Human Right created by the governments, institutions, or even by individual person. The worst situation is that the percentage of poverty in the world increase tremendously. To fight the poverty improvement in the world, the United Nations declared United Nation Millennium Declaration in 2000 and afterward the realisation of the declaration is in a form of Millennium Development Goals 2015.

Based on the Millennium Development Goals, the global attention concentrates to overcome the world poverty, starvation, lower education, gender equality, and health problems especially AIDS. Those problems mostly happen in slum areas and squatter settlements, where the poor lives in the cities of developing countries. (United Nations, 2006) Since the worst environmental quality within the city is mostly in slum areas and squatter settlements, many people including the government officers and private

institutions have an opinion that the slum areas and squatter settlements are the garbage of the city which makes worsening the image of the city. Therefore there are many urban planner and designer, who change the slum areas and squatter settlements into a more beautiful area according to their interpretation.

The interpretation of the worth “beautiful areas” is often influenced by the background knowledge of the experts and their experiences in visiting European and other industrial countries. It is no doubt that the output of the planning and design created by the experts is usually an ideal city planning and design like the cities in Europe, USA, Australia or any other developed countries. Thus the slum areas and the squatter settlements will be destroyed and replaced with the luxurious buildings, supermarkets, garden of the city, which are actually enjoyed only by the people from the middle to upper class.

2. THE CONSIDERATIONS OF INDONESIAN GOVERNMENT FOR THE INFORMAL SETTLEMENT IN URBAN AREAS

The Indonesian government pays attentions to the poor people, who live both in rural and urban areas. Since the poor in urban areas live in informal settlements, the government always try to help them with many housing developments for the poor. According to the written regulations the Indonesian government helps the poor and developing their informal settlements which are developed in the city center. The government attentions can be recognized in Indonesian Constitution 1945 (UUD 1945), governmental regulations, up to district regulations implemented in all of Indonesian areas. It is clearly written in the constitution 1945 section 34 that the poor or the needy and the neglected children will be protected by the government. Besides in the amendment of the constitution 1945 section 28A up to 28J made in 2000 it is clearly written that the human basic right is protected and raised to be a base of making the other government regulations.(MPR – RI, 2000)

Based on the observation, the problems of the informal settlement begin to appear when the local government considers the informal settlement as a bad image of the city that must be removed. In fact the informal settlement has been developed up to the second generation or more than 15 years. They have already been root socio-culturally and economically, even psychologically in that area of the settlement. By removing the settlement, in one side the local government tries to beautify the area based on the concept of beauty idealized by the city planner and the staffs of the local government. On the other side, the local government stimulates indirectly the appearance of the informal settlement in the other areas, because the grass root people who are not able to buy a formal

house will look for another empty area in the city centre as their place to build a new informal hut. Besides, the local government self has violated the most basic regulations, the constitution 1945 section 34 and the amendment of the constitution 1945 section 28A till 28J about taking care of the poor and the needy and the implementation of the human right.

For the low income people especially the lowest level group *(grass root people)*, they don't have any possibility to negotiate with the local government, when their house must be destroyed for the implementation of master plan of the city. They are very poor and most of them just have a basic education. So that it can be understood if most of the grass root people do not have an access to the information and they do not absolutely know about the human right. When there is a forced condemnation of their house, they just accept it without thinking about their right as a human being.

By regarding the poor as partners and not as problems, community responsibility, accountability, and development can be returned to the community itself. Besides a more responsive and sustainable system of urban environmental management implemented can also be returned to them. To regard the poor not as a problem but a solution requires a radical change in thinking, and in expectation, because mostly the experts always think that their knowledge is the best and if the poor follow their instructions, their welfare will be improved well. In reality the poor knows more very well what they need and what they want compared to the experts. Hence to develop informal settlements it is better to involve the inhabitants and try to stimulate them in order to know the problems they face and the potencies they have. It benefits the urban environment, and it benefits every section of urban society. It also provides these sectors with an increased understanding of the pressures and needs under which each much operate. Most significantly, however it makes it clear that every inhabitant of the city is a stakeholder, and as such has something unique and important to add to the process of development in the city.(Cody, 1996)

3. THE CHARACTER OF INFORMAL SETTLEMENT IN THE CITY

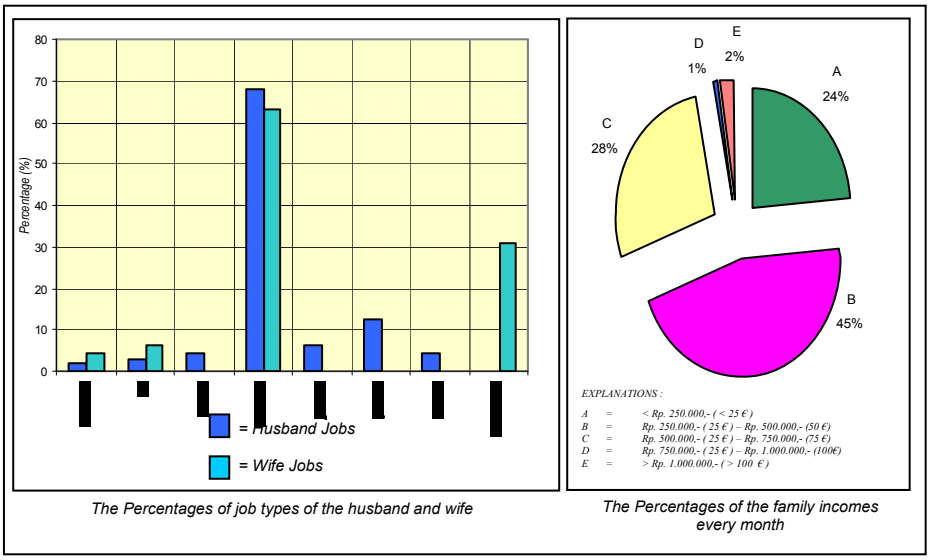
The informal settlements grow almost in all big cities in developing countries. The character of these settlements is quite interesting, because they develop spontaneously without any planning. To understand the character of such settlements, it is better, if we know the socio-culture of the people and the spaces in which they carry out their daily activities. The following explanations are taken from several case study in Indonesian cities like Medan, Yogyakarta, Malang and Surabaya.

3.1 The socio-cultural character of the people living on the riverbank

By paying attention to the economical situation of the low income people living in slum area, it can be understood that they are hard workers, who are persevering in looking for their basic necessities of life for their family. Not only the husbands who work for his family, but also the wives work to help their husband for additional incomes. Their dependence to the centre of city bustle is very strong, because from the centre they can get their income everyday. They work as a street vendor, becak drivers, second-hand collectors or sometimes they work as a bagger. Usually their income per day can only be spent by the whole family in one day. This means they cannot save their money for other purposes like buying a new cloth, buying or renting a formal house, and sometimes they cannot send their children to the high education. Therefore there are many young people, who cannot continue their study in higher education, because their parents cannot afford for their school. They have to help their parents and automatically they will work in informal sectors,

In the case of informal settlement along the Deli and Babura riverbanks in Medan, the inhabitants live behind the formal housing and commercial areas. The settlement cannot be seen from the street. From the graphic below it can be seen that the main job of inhabitants both for the husband and wife is in informal sectors. The highest percentage (45%) of monthly income of the inhabitants is about Rp. 250.000,- to Rp. 500.000,- There also families whose income is more than Rp. 1000.000,-, but they are only 2 %. *[see Figure 31.1]*

Figure 1. The Percentages of Job Types and Monthly Income of the Inhabitants living in Informal Settlements along the Deli and Code Riverbanks, Medan – North Sumatra



The Percentages of job types of the husband and wife

The Percentages of the family incomes every month

This case is quite interesting because the percentage of wife and husband who work in informal sectors almost similar, but the percentage of housewife in the settlement is more than the retired and unemployed men. This means during the day time, in housing area mostly the woman are more than retired and unemployed men.

The inhabitants in informal settlements are very heterogenic and mostly they come from other cities or regions, which are more than 60 km from the settlement where they live now. Although the people in informal settlement come from different regions, they can live together in harmony. It can be showed, when one family needs help, many other families will extend their hand to give their help. The relationship among the people living in the informal settlement is very close and it is not limited by the difference of ethnic group, religion and race. One condition that can unite the socio-cultural of the inhabitants in informal settlements is that they belong to the low-income group who works in informal sectors.

3.2 Settlement Pattern and Building Architecture

Building density in informal settlement is very high and the position of one house to the others is quite close. It is very danger, because if there is a fire in one house, the fire can spread out to the other houses easily.*[see Figure 2]* Mostly the settlement pattern in the settlements formed from the circulation is seen untidy. There are certain pathways often passed through by the inhabitants. This path could be the main circulation of the settlement. The other small pathways like an alleys or alternative small ways called “mouse path” can connect to main pathways or even to the main roads. The pathways are spontaneously formed as a consequence of house developments in the settlements done without planning.

Figure 2. Several Roof Form of non Permanent Houses Developed along the Riverbanks of Babura River in Medan

Houses in informal settlement have different characters, even though in general it can be distinguished as a permanent, semi permanent and non permanent building. The architectural typology of the houses in informal settlement is relatively simple with a quadrangle ground plan. The building orientation is towards the Kampong's pathway or to public open spaces. There usually has two entrances to the house; main entrance is located in front of the house and side entrance is located in the back of the house. Because the land is very limited, the people build their houses as efficient as possible and it is adjusted to their needs.

The roof form is dominated by the simple form of Javanese roof style such as "kampong" and "panggang pe" roofs. The other Javanese roof forms like 'Limasan', 'Tajuk' and 'Joglo' can be seen just on few houses. Generally the house with the complicated form of roof is owned by the upper low and middle income people. The wall of the house is made from the very simple material like carton, plastic and bamboo. Several houses have brick walls and sometimes with good finishing. The floor is made from board or from bamboo, cement, tile, ceramic or maybe just from soil without finishing floor.

Rooms inside the house are varied from simple arrangement with only one room till the house with the rooms divided complexly. Generally the room arrangements are divided into a public room, like terrace, and the guestroom in front side; the bedroom, the workroom and dining room are in the middle part; the kitchen, bathroom and washroom are located in the back side of the house. For the grass root people, they use the rooms in their house very flexible, because they have only one or two rooms in their house. They use the front room as a living room, work room, bedroom and also for dining room. If the upper low-income to middle income people have a lot of family members, they will also use the rooms more intensively and very flexible like the grass root people.

3.3 Public Open Spaces and the Circulations in the Settlements

The open space in informal settlements has been formed spontaneously, because the houses are developed without any planning. The spaces do not have certain patterns and form, but the inhabitants use the open spaces very effectively. From the field observation, it has been obtained that there are some circumstances, which stimulate the activity of the inhabitants in open spaces or on the Kampong's pathway. One of them is the availability of the open space as an orientation of some houses. By facing to the one open space, the communication and the social interaction among the families living in the houses can be involved well. [See Figure 3] Generally the open space that explained above will be used effectively by the inhabitants: children, young man and adults. They use the open space within the settlements with time sharing or they use the open spaces by turns.

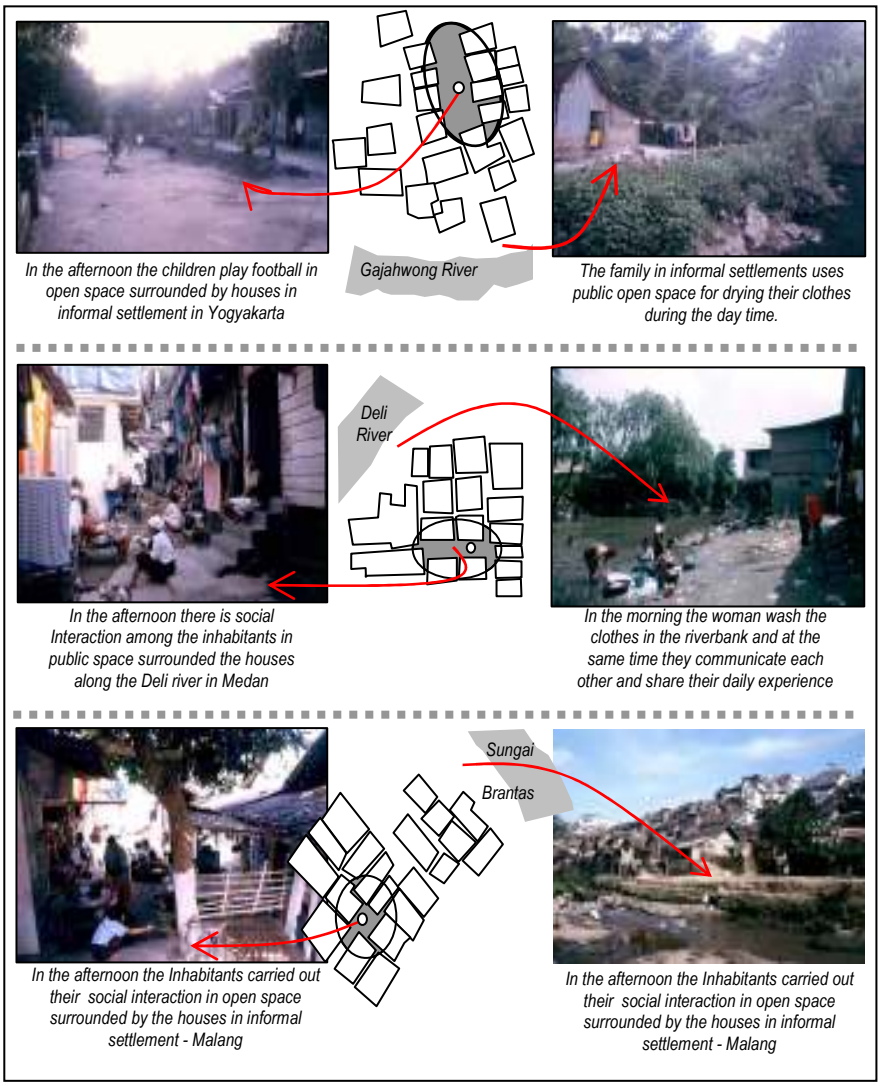


Figure 3. Several Houses Have an Orientation into One Open Space

The availability of infrastructure facilities in open spaces can also stimulate the social interaction of the inhabitants. The technical infrastructure facilities which can stimulate the social interaction are public water tap, public well. Whereas the social infrastructure facilities which stimulate the social interaction too are guarding house, food stall, musholla (small mosque), etc. Those infrastructure facilities above can often rouse the

activities of the people in order to make a social interaction and communication among them.

Based on the field observation, the open space in the settlement is very important for social living of the people. By observing the socio-culture of the people living in informal settlement, it can be seen that all of the society members like children, young people, women and men, always have social interaction in the open spaces. If there is no open space in the settlement, they will carry out their social interaction on the public pathways near by their houses. For the children the public open spaces have a special meaning, because they play and express their creativity within those spaces. In spite of this, the open spaces are needed very much for the settlement with dense built-up areas, because the spaces have a function as a place for air circulation in the settlement.

The facilities related closely to the public open space in informal settlement are the Kampong's street connecting the houses and open spaces available in the settlement. Like open spaces in informal settlement, the street have also been formed spontaneously, because of sporadic development of the houses. The streets have no certain form and size. Nevertheless the street often passed through by the inhabitants can be categorized as a main local Kampong's street. The main Kampong's street is usually wider than other connecting pathways or mouse paths. The width of the main street is about 1.5 – 3 meter and the connecting pathway is about 0,75 meter. [See Figure 4]

Alley as a pathway connecting the kampong streets in Winongo riverbanks – Yogyakarta. This strong alley is used every day by the nhabitants as a connecting pathway

Pathway connection in Deli riverbank in Medan. Even though the alley is bright enough, the vertical plane (wall) and overhead plane (roof) make the impression of the alley strong

Pathway connection in Brantas riverbanks in Malang does not have an impression of alley, because one of the walls is higher than the other and the sunlight is so bright

Figure 4. Typology of Alleys between Houses in informal Settlements

In the case of informal settlement along Wonokromo riverbanks, there are not so many informal open spaces, because the houses were developed in linear pattern directly following the kampong street. Small informal open spaces are located between the houses. Since the open spaces are few, the inhabitants use the kampong street as an open space for carrying out their daily activities. In the morning the woman look after their children, who play on the street and the young people playing chess and card also on the kampong street. The out door activity of the inhabitants is always carried out under the shadow of the trees, houses or any other buildings.*[see Figure 5]* This situation explains how important the public spaces for the inhabitants in informal settlements.

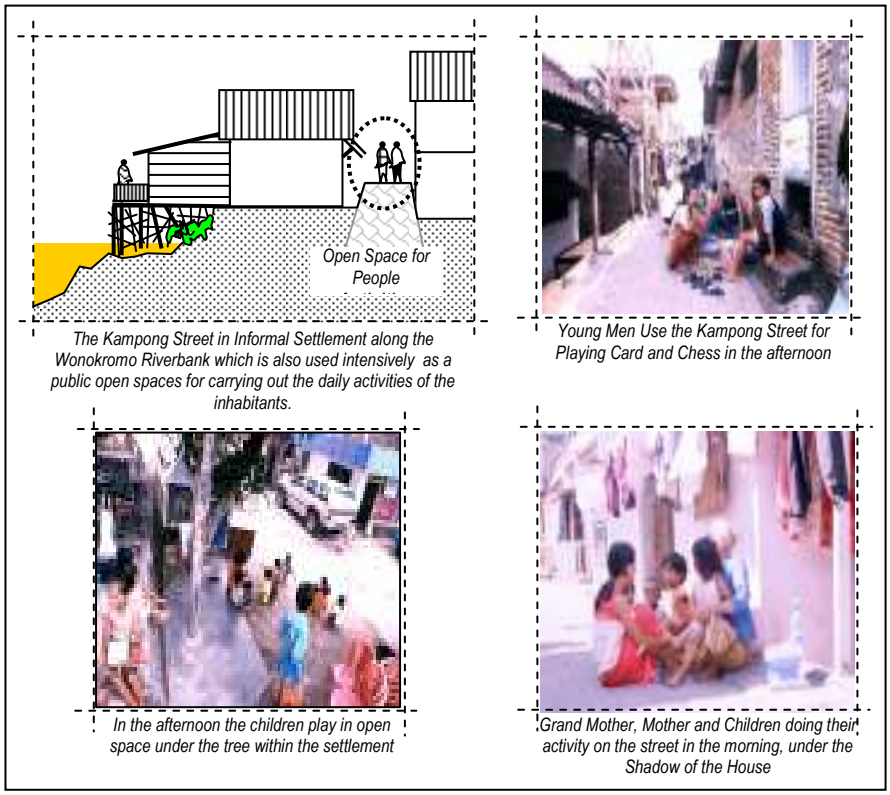


Figure 5. Spontaneous Public Spaces within Informal Housing Areas along the Riverbanks

4. SUSTAINABLE DEVELOPMENT BY THE URBAN POOR

Understanding the activities of the poor in architectural space within the informal settlements is very useful for arranging development strategy based on the character and capability of the inhabitants.(Khudori, 2002) They can live with minimal basic infrastructure and they use all facilities very effective and creative. The examples mentioned in previous discussion shows how the people in informal settlements live with minimal facilities. Besides the poor people in informal settlements are mostly hard workers and usually they work with high motivation and perseverance, even though their income is very low.

Listening to the community may provide ways to improve the understanding about the socio-culture of the people and give bright ideas how to develop their settlement. Indigenous people demonstrate great ingenuity in developing their residential neighborhoods and in organizing the open spaces and construction of housing. Therefore their ways, plans, designs and building materials are often far better suited to local needs, incomes, climatic conditions and resources than the official, legal standards demanded by governments. To develop the informal settlements it is much better to involve the inhabitants in the development process.

To a large extent, the future city will be financed, built and shaped by people with low incomes-garbage collectors or scavengers. Shoemakers, peddlers, those making clothes, foods and crafts in their homes, maids, low-paid factory workers, shoe-shiners, market sellers and others. The people provide cheap labor and cheap goods and services on which much of the city's economy depends. But they are excluded from legal land and housing markets, legal health services and very often legal markets for water and transportation. (Hardoy, etc., 1990. p. 232)

Poor people demonstrate great ingenuity in developing these new residential neighborhoods and in organizing the construction of housing-even if government regards them as illegal. Their ways, their plans, their designs and their building materials are often far better suited to local needs, local incomes, local climatic conditions and local resources than the official, legal standards demanded by governments. Like in previous discussion, this is usually because official standards are derived from western models which have little relevance to local circumstances and take no account of local climate, local preferences and availability of local building materials. (Hardoy, 1989)

According to Indonesian regulation discussed earlier, the government should pay attention to the poor people including their settlements. Especially if the local government wants to make a master plan of the city, they must consider the informal settlements as a special area which has potencies to be developed. In other word the development strategies with

eviction or destroy the informal settlements have to be left behind. Of course other strategies to restrict or to limit the development of informal settlement in the city should be implemented, because it is better and cheaper to anticipate the development of informal settlements than to improve them.

If the urban poor in informal settlements is given a chance to develop their settlement, it is quite interesting to consider Seven specific recommendations on how to improve the human settlements of the world's urban poor. (UNHCS, 1996) Those recommendations are:

a. The supply of residential land
b. Sources of institutional housing finance
c. Improving access to, and affordability of, building materials for the urban poor
d. The opportunities for employment generation
e. Encouraging the availability of accommodation for rent with very cheap prize
f. Acknowledgement of the role of shelter also as a workplace
g. Encouraging partnership between governments, local authorities and communities

The first step to carry out sustainable development in informal settlements within the city is to change negative perception and opinion in seeing the informal settlement including their inhabitants.(Ribbeck, 2002) Afterwards the government or other institutions should have a good will to think that the informal settlement is a part of the city that has a specific character and has to give more attention. If the opinion and perception have been changed, the development strategy with standing beside the poor in facing their problems, understanding their potencies and capabilities can be implemented. Finally sustainable development for improving environmental quality in informal settlement can be achieved by the urban poor together with the local government or/and other institutions.

5. CONCLUSIONS

As a conclusion, there are several statements and ideas for improving the informal settlements derived from the discussions and explanations above. Those statements can be used for improving sustainable development strategy in informal settlements around the city center. Those statements are:

- The development program with demolishing the informal settlements cannot solve the poverty problems of inhabitants. In one side such development program solves only a part of the city, but in the other side the program stimulates the new informal settlements in other part of the city.

- The opinion which sees that the informal settlement is garbage of the city should be changed in the other way around; it should see that the informal settlement is a special housing area that has to be developed specifically.
- If the inhabitants are involved in the whole process of development program in informal settlements, the program will be sustainable.
- Transforming the spatial experiences of the poor into sustainable development strategy can be carried out well, if the inhabitants are involved in the whole process of planning.
- Using the spatial form of informal settlements as an orientation of making a plan for sustainable development strategy can make the process of planning faster and easier.
- The improvement of individual house qualities follows the development of public open spaces and infrastructure facilities which are developed earlier.
- Social infrastructure facilities are needed by the inhabitants for carrying on their social interactions.
- The environment quality within the informal settlements can be improved with planting several types of vegetations in public open spaces, and spaces in front of the houses.

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1 - 12

The Harmony Concept Between Government Program and Community Need to Achieve Sustainability

Idawarni[11]

ABSTRACT

The background of research is conditions of settlement in slum area at Tallo which are most apprehensive; lack of facilities, the houses made of flammable materials, and some criminal action occurred in the density settlement. Upgrading Programs has been twice implemented in this area. Those have the same aim, which are to improve street and drainage condition around the area. The difference between those is the using of material which is the first program used asphalt as street cover material and the second one used paving block. Although the upgrading programs had been done, the condition of the settlement did not improve significantly.

The problems of settlement are not only lack of infrastructure condition and needs, but also lack of community welfare, unemployment, housing conditions, and the existence of the warehouses in the settlement. The flood problems are also appeared in this area which be closed with the water channel to the city disposal channel so in the rainy season, the area is always flooded and enter into the entrance of the houses.

The objective of this research is to find the root of the problems and find good solutions for the environment and how to meet the major needs of the settlement upgrading program into the local community point of view. Field research and questionnaires were conducted as research method to the research objectivities in the needs of community for good environment. Furthermore, the data from the field research was analyzed by conducting

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synchronization with the theory of environmental sustainability. Results from this research were showed the comparison study between first and the last condition of the settlement area which had the upgrading program implementation. These findings could provide a new guideline for the government in policy related to slum upgrading

Keywords: Harmony, Government Program, Community Need, Sustainable

1. INTRODUCTION

Slum and squatter settlements are caused by growing at alarming rates. They are the products of failed policies, bad governmance, corruption, inappropriate regulation. Dysfunctional land markets, unresponsive financial system, and a fundamental lack of political will.

Each of these failures adds to the toll on people already deeply burdened by poverty and constrains the enormous potential for human development that urban life offers. (TOT, 2000)

La'latang district is a part of Tallo sub district. The conditions of settlement in slum area at Tallo which are most apprehensive; lack of facilities, the houses made of flammable materials, and some criminal action occurred in the density settlement. Upgrading Programs has been twice implemented in this area. Those have the same aim, to improve street and drainage condition around the area. The difference between them are the using of material which are the first program used aspalt as street cover material and the second one used paving blok. Although the upgrading programs had done, the condition of the settlement did not improve significantly. The community had never been involved in planning process or making and taking decisions connected to their environment. So the local community was not satisfied with the results of the upgrading program

At present this environment is still visibly slum. Upgrading programs that have been conducted in this area can not create the environment to be better than the previous, especially channel conditions. Society less aware of the trash due any places indeed, but community do not have rubbish management to pickup the rubbish from house to that space. Although the government has been providing the local waste disposal temporary, but the location was quite far from the settlement.

The existence of ware houses in the settlement is very disturb of the disposal cannel. Beside that furniture industry and frame (window and door) which are located along the alley have waste, and the owner of the industry never think to throw the waste to the garbage dump, so that pedestrian is showed a bad view, the waste is stack like a little mountain in the back yard of industry. Government is not take a opinion yet, connect to the problem.\\

2. THE PROBLEMS

The problems in settlement were not only lack of infrastructure condition and needs, but also lack of community welfare, unemployment, housing conditions, and the existence of the warehouses in the settlement. The flood problems are also appeared in this area which closed with the water channel to the city disposal channel so when rainy season, the area is always flooded and enter into the entrance of the houses.

3. THE OBJECTIVES

The objective of this research is to find the root of the problems and find good solutions for the environment and how to meet the major needs of the settlement upgrading program into the local community point of view.

4. THE THEORY

The definition of slum**,** as defined by the United Nations agency UN-HABITAT, is a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. Although their characteristics vary between geographic regions, they are usually inhabited by the very poor or socially disadvantaged. Slum buildings vary from simple shacks to permanent and well-maintained structures. Most slums lack clean water, electricity, sanitation and other basic services.

There are many theories about upgrading slum, but these below, I would like tried to show the simply way to understand and know about it. So that we can make action to make the program sustainable in the future.

Slum upgrading consists of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities.

The main objective of slum upgrading is to alleviate the poor living standards of slum dwellers. Many slums lack basic local authority services such as provision of safe drinking water, sanitation, wastewater and solid waste management. Slums are characterized by unhealthy sanitary conditions, poor and unplanned housing, destitute families and low community cohesion save for lack of identity.

Sustainable development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but in the indefinite future. The term was used by the Brundtland Commission which coined what has become the most often-quoted definition of sustainable development as development that “meets the needs of the present without compromising the ability of future

generations to meet their own needs."

Sustainable development ties together concern for the carrying capacity of natural systems with the social challenges facing humanity. As early as the 1970s "sustainability" was employed to describe an economy "in equilibrium with basic ecological support systems". Ecologists have pointed to the "limits of growth"[4] and presented the alternative of a "steady state economy" in order to address environmental concerns.

The field of sustainable development can be conceptually broken into three constituent parts: environmental sustainability, economic sustainability and □ocio-political sustainability.

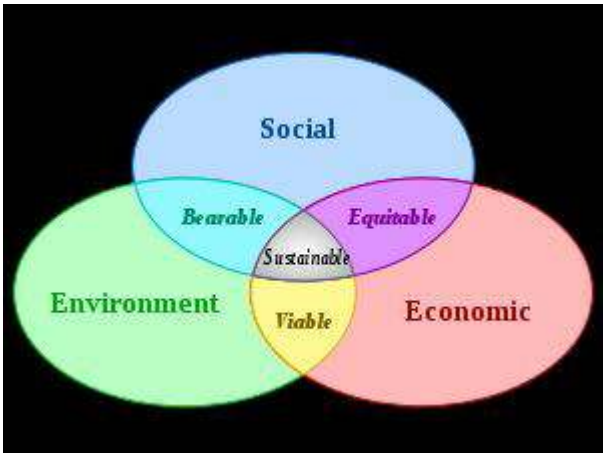
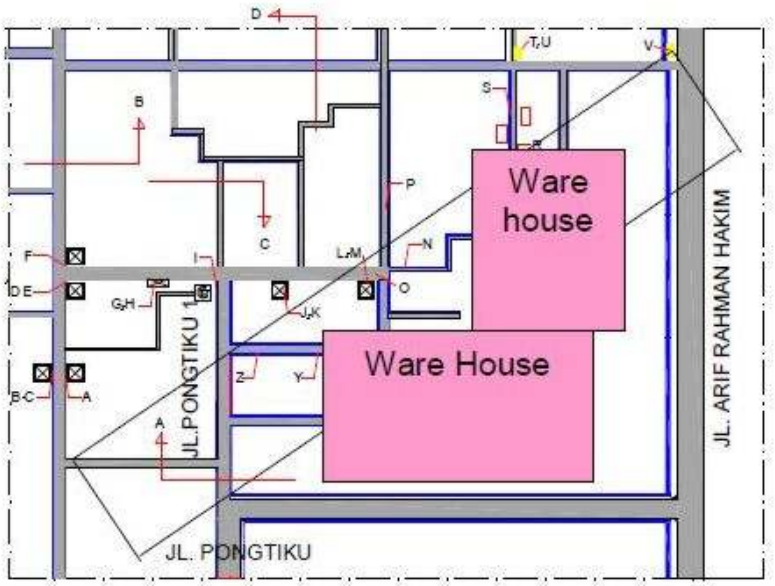


Figure 1. Scheme of sustainable development: at the confluence of three constituent parts (UCN. 2006).

5. RESEARCH METHOD

Field research and questioners was conducted as research method to the research objectivities in the needs of community for good environment. Furthermore, the data from the field research was analyzed by making synchronization with the theory of environmental sustainability.

6. EXISTING CONDITION



Picture 2. Sketch of the area, where it is affected by direct impact of the existence of ware houses

Picture 2

Picture 3

Picture 4

Previous condition of the street and disposal channel before the second upgrading. The asphalt flake because often submerged of flooding in the wet season and the channel is fulled by rubbish.

Picture 5

The mud makes drainage to be dirty and shallow. Drainage is made as a garbage dump.

Picture 6

Picture 7

The narrowest and shallowest sewer in the settlement

Picture 8

Channel disposal settlement conditions can not accommodate the capacity of dirty water so the dirty water will be run over the road

Picture 9

Picture 10

Drainage only at the one side of alley and the ware house at the end of the blind alley. The existence of the warehouse on the settlement area blocks the flow of water from drainage channels in the settlements to the city disposal channel that

Picture 11

Illegal building on the drainage. People use to be small shop and their existence cover the drainage so that difficult to clean rubbish in the drain

Picture 12

Picture 13

Displaying window and door frame on drainage, because in area there are many home industry

Picture 14. The image of waste disposal temporary that is appear sporadically, in the rainy season will overflow to the street and cause dreadful smell

From the investigation to the respondents that we were taken randomly at inhabitant who have houses stay near of the warehouse like alleys 2, 4, 6, 6a and 7 at jl. Pongtiku I, it is showed percentage of the answered below:

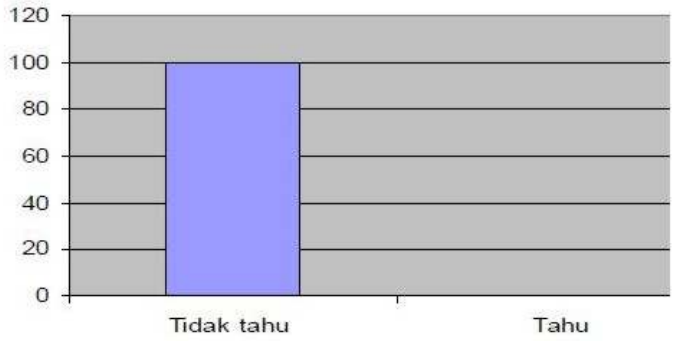


Table 1. Socialitation of KIP

100% of respondents answer didn't know about the KIP (Kampung Improvement Program) in heir area before KIP was implemented.

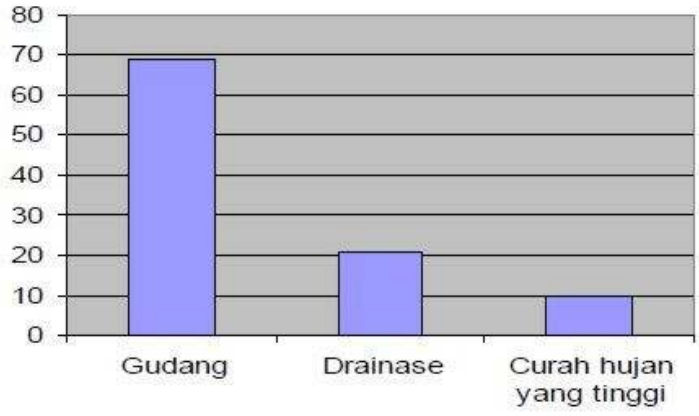


Table 2. Caused of fload in settemant

In table 2, Show to us, more than half the public said that, the existence of the warehouse in heir settlement into the causes of flooding in their and just more than 20% supposed that, drainage condition, and the others said because of the high rainfall

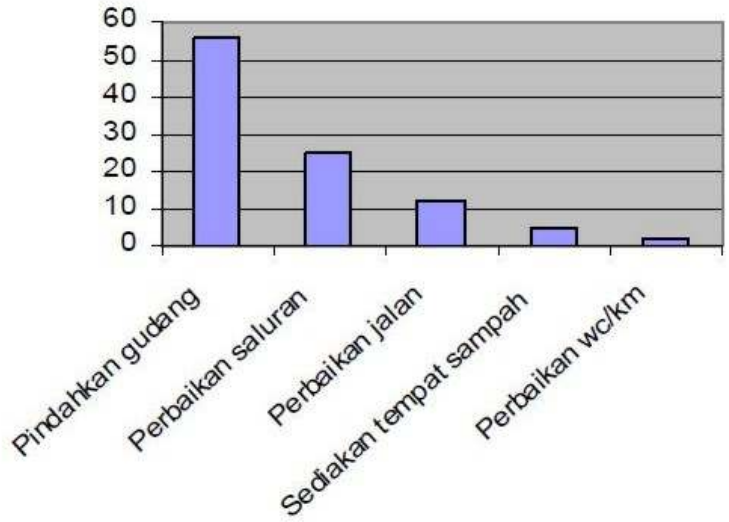


Table 3. Priorities of community Need

Table 3, show the priorities of community hope to the local government action :

1. To move location of the ware house to KIMA
2. To renew or upgrade condition of drainage
3. To upgrade street condition
4. To prepare basket bean and management of waste disposal
5. To repair public toilet

The pictures showed that condition before and after slum upgrading are not much different, however, the material of streets is better. This might be caused by the age of the program still new (a year).

The drainage is still clogged up by rubbish, dirty, and break off at many place so the water cannot go through into the drain causing flooding. The ware house wall blocks the drain so the water difficult to flow.

People don't have rubbish management in their environment to pick up it to the TPS (garbage dump temporary) Table 1, 2, and 3 show the community opinion, wish, and complain about their environment and the local authority has to pay attention and do it.

From the theory ,Slum upgrading consists of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities. So that there are many action which are need in the area to do as soon as possible to create a sustainable of the upgrading program.

We tried to start from the first theory, the field of sustainable development can be conceptually broken into three constituent parts: environmental sustainability, economic sustainability and socio-political sustainability

1. Environmental sustainability, this is relation to the physic condition, including basic infrastructure
2. Economic sustainability refers to the welfare of community. This must be follow by action to prepared capital for community to increase their business
3. Socio-political sustainability, it means government take wisdom deal to the land tenure to create stability condition in settlement.

The other theory came from TOT'2000 in ITS Surabaya, the trainee give details solution about local participation. Hereby :Slum upgrading includes physical, social, economic, and environment improvements. Typically the objective involves a process of local participation through action including :

1. Improving and/or installing basic infrastructure (including combination of water reticulation, sanitation, and waste collection, rehabilitation of circulation-foothpants, streets, strom drainage and flood prevention, security, lighting, public telephone, etc.
2. Removal of environment risk
3. Providing incentives for community management and maintenance
4. Constructing and rehabilitating community facilities such as nurseries, health posts, etc.
5. Regularizing security of tenure
6. Home improvement
7. Relocation/compensation for the small number of residents dislocated by the improvements
8. Improve access to health care and education as well as social support programs to address issues of security, violence, substance abuse, etc.
9. Income-generating programs including skill and business training, micro credits

All theories and solutions were not significantly different, those have objectives to upgrade the environment, human, and houses condition.. Therefore it must be matched with the community local need priority. Combining field survey and theories related to the settlement, many actions should be implemented as soon as possible, namely :

1. Improving and/or installing basic infrastructure (including combination of water reticulation, sanitation, and waste collection, rehabilitation of storm drainage
2. Removal of environment risk by ask the inhabitants participation in
3. Providing incentives for community management and maintenance
4. Constructing and rehabilitating community facilities such as public toilet
5. Home improvement
6. Regularizing land use

The detail actions were :

1. Related to the environmental and physical condition: to repair or improve the condition of drainage channels by:.
   - Forward channel is lost and the discharge of the channel to create the environment sewer to the city disposal channel.
   - Adding depth and width of the channel, especially in the discharge of the channel is very narrow and shallow.
   - Improving the physical condition of the damaged channel.
2. Connected to the social economic condition of people around. The government should provide financial assistance in the form of revolving capital managed by a foundation established by the communities themselves with the control of the government (as was done in the KIP Plus Surabaya). In addition to providing motivation for people to bring back culture cooperative of them are useful for security for business and environment health.
3. Related to the organizations. Community organizations should establish trash heap with involving all elements of society in the settlement. Provide wages to the waste transporter who will collect and haul garbage from the house to the garbage disposal temporary which is owned by the government. And this organization will give sanctions to people who neglect to remove their rubbish in any where and any place especially in the water channel
4. Dealing with local government regulations:
   - To make regulations that prohibit development ware house in the La'latang district and restore the land to first function as a open space
   - To control and prohibit the building or up a stall on disposal channel.
   - To listen and care about public opinion on the priorities that the government should do in their environment in order to upgrading the environment before planning and making of the program.
   - To involve in the planning and implementation of the program, especially in the case of control function so that the quality of the work can be more secure and will be sustainable.

All of these aim to harmonize desire or need for major government

programs with the community so that in future no more complaints and feelings of the people who are not satisfied, and they will appreciate what has been done by the government will maintain and Sustainability

7. CONCLUSION

To find out the harmonization of government program and community need as a efforts to create a good environment, than government has to confront people need, physic condition of environment, local government regulation relation to the land use.

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1 - 13

Slum Upgrading Program in The Edge of The *Matano* Lake as Efforts to Promote the Town Image of *Sorowako*, East Luwu Region - South Sulawesi

Arifuddin[12]

ABSTRACT

Considering the importance of the settlement upgrading in the edge area of water is the study background for various experiences in the development of slum settlement in the edge region of water continuously. One of the appointed cases was the traditional settlement region to the edge of the *Matano* Lake located in the *Sorowako* region. This traditional settlement development has been influenced by a new development of settlement and Industrial area which has been developed by PT. International Nickel Indonesia (PT. Inco). The population growth has been increase rapidly (7,89%/years) where there are no good management and uncontrolled for illegal and sporadic settlement. In this return, this traditional settlement apparently has become slum settlement. This region has a big potential for high income, tourism and resort development (the lake, mountains, and the mining tour) that could gave the contribution towards the development of the town and the settlement.

This paper explored and studied the various upgrading program enhancing the quality of slum traditional settlement of the edge *Matano* Lake which had been carried out by the government and the local community as well as the impact that were caused. The study approach was carried out with the identification towards several problems of settlement, identification of the physical and non physical potential of the area, as well as the identification

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of the aspirations of the community in the development program by the government and PT. Inco.

The result of this study were learning process that could suggest an alternative solution to the management strategy and slum settlement arrangement to the other territory that has a same characteristic in order to increase the quality of the environment and his community, as well as reinforce the town image in East *Luwu* region.

Keywords: Slum upgrading, traditional settlement, Matano Lake, Sorowako Town.

1. INTRODUCTION

Soroako society comes from the community of "*Helai"* society and some others from "*Mori"* ethnic (poso) from the society of *Toraja* who has been gathering together and make special community as like as *Wawondula* and *Wasuponda* that was under the control of *Luwu* Kingdom government (Abu Bakar, 2004). The *Sorowako* population and some others from "*Dongi"* was lived together in *Sorowako* (Now is called Nickel Village) where the farming is the main job of its population. Sorowako then become a small, great and cute town for the presence of multinational industry PT Inco since 1968. The improvement appears since the way Sorowako-Wasupondo-Malili which has developed the near population accessibility to Malili or *Palopo* region that was not done evenmore with the political pressure in the separation movement by DI/TII lead by Kahar Mudzakkar in 1950's (Abubakar, 2004). Nowadays, *Sorowako* with thousands of its natural resources is not only well known in Indonesia but also in almost all over the world. He is famous as an industrial beautiful city with very nice tourism place.

The location of *Sorowako* geographically is in the mountainous with its deep lake and the position predicted as the result of collapsed of the mountain. Administratively, *Sorowako* is located near by the *Matano* Lake and Towuti in the eastern side. In 1960's the population of *Sorowako* in the Nickel village live together another. Their houses are made of wood with palm as their roof or metal march along the nickel village with the position is in the back side of the lake, so that almost all of the houses has a nice back yard. The population of *Sorowako* which are included three areas *Sorowako* village or the disrick of Nikel and Magani in 1906 about 15.425 people with the development about 487,77 km 2 wide area. The nickel village itself as the main town, there lives about 4.987 people with the development about 8,11% per year. Nowadays the location is being used to built shelter 2002 shelters in 2007 and there has been about 399 permanent house.

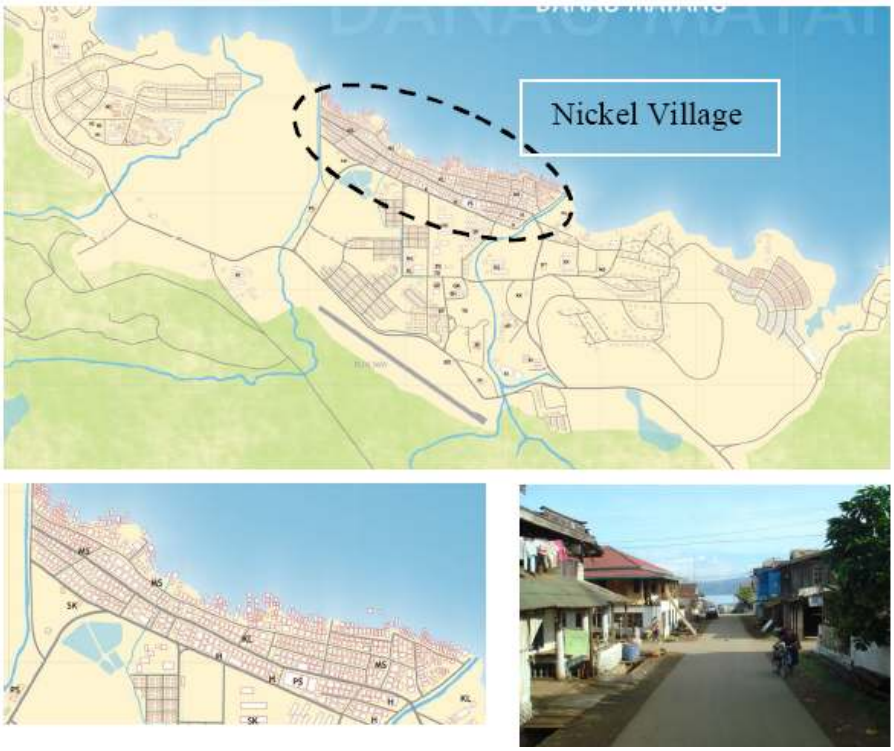

Figure 1. Exisisting Nickel Village, 2007

For the improvement, development and the enhancing of PT Inco Industry through the rapid population grow with various kind of activity and all of their facilities has changed the urban form caused the change in the function of traditional settlement space to the social and commercial sector that demanded the quite high development. Gotten by the function trend of commercial space in the centre of settlement shifted the community's settlement to the edge and because increasingly the shortage of the land, Different kinds of population with various kind of activity has made the individual need conflict between group and inter sector then absolutely need to have the improvement of tools and the town facilities equipment. With the land as consideration, its finally has some problems with the town. The problem will be continually happened and being a problem of settlement and urban that is make it worse and make it difficult to be solved . Inexact and late to move and fine the problem solving, the problem will have them make such a lot of effort, time and fund that might be getting higher and higher.

Here are any kinds of problem of settlement and urban used to be paced nowadays:

1) The rapid grow of some kinds of tools and facilities that is not balanced with the land available and unorganized plan and as the matter of fact so there has been unbalance of load and the space along the land
2) The using of land by PT. Inco has been relatively good and well organized, some how in the land of settlement along with the Nickel village, the main town in the east side sees to be misused land, really unorganized and as the result that there might be come a slum area.
3) Its function and using as the center of the district and a reliable land, Sorowako ha some places which are fully good to be developed as tourism object however its using has not been being optimized.

Figure 2. Slum Condition in Nikkel,Vlg. 2007

Based on the fact above, several programs has been organized by the fact above, several programs has been organized by government, PT. Inco and Sorowako society to enable to built and developed the town and settlement upgrading. The programs that have been planned generally well done, yet any kinds of program has been done but do not give count contributions to the development of the town. In this case study, any kinds of suggestion will be included. Hoped for so that the strategy that was applied this could become the lesson for the designers of the town, the observer of the water region, the decision maker, policy makers, private enterprise's side and the wider community in the development of the continuous settlement in edge of the Matano Lake.

2. METHOD AND STRATEGIC ISSUES OF STUDY

The development of Sorowako is ideally settled based on its function as a location that is rely on the East Luwu which has function as meaning area and as business center and also as tourism object. In this matter, *Sorowako* need to be used optimally and continuity to support its function and keep the accommodation developed tools and equipments of the town to be shared.

The society need to start now to do with the local services, to measure of how far the succeeded to developed the quality of slum area and those things can be known by using qualitative method through observation, literature study, library research and interview. The study area include *Sorowako*, the research will be the condition of slum area at the Nickel village located in the edge of *Matano* lake. Any kinds of strategies and issues will be the main focus of the research include a). How to develop *Sorowako* which is potential with the mine, agricultural and tourism object b). Haw is the development of housing organizing of *Sorowako b*ased on the proper plan and building strategy without careless of the safe of our environment and several economic side of its society c) How do we synergize the housing building (former building) which tend to be slim and the building wil be build by PT Inco d) How do we involve all of the society (government, PT Inco, the society and private sector) in all phase in case of building the building.

3. THE HISTORY OF PT. INCO IN BRI

Figure 3. Sorowako village in 1970

Around 1968, PT Inco got the recommendation from the government of Indonesia a mine fabric of nickel at Sorowako. On April 1975 The president

of PT Inco Phil Jossep recommended to build settlements for his staffs at Sorowako. Wawondula and Wasuponda. At the time, the places have been known as Nickel Village now in Wawondula there are also 3 shelters where there are about thirty populations live and also there are only sixteen of wood houses with the population about 150 people. Some how the housing location recommended to be the center of stay is Sorowako with the consideration that, and has a nice view to the lake. The executive of Inco drive the developer to built it there with the reason that we can feel the beauty of Matano lake feel its beauty which where the lake famous with “the beautiful lake”. They was wondering that the house that is going to be built will enable those who live there can see the lake and feel the beauty of the lake. The building of the house will be followed by the road building project to the town and other supporting building where the road made by the Dutch will be developed. The location that was only a small village changed into a town. Now, It has good facilities and developed and moreover, one of famous Senior High School In South Sulawesi is there. Yet, it is a really poor thing when the housing won’t be build in Sorowako with the reason that is going to be a slum area and the population will get rapid and its finally proved and being a problem to be solved as soon as possible.

The building of the mine, fabric and housing of PT. Inco Sorowako has given a lot of income for our country in case of building a new town, an make new jobs. General M. Jusuf as the ministry of industry at the time stated that, he hoped that by the presence of Inco is not in enclave position and has good effect to the people around. The hope comes true, and also its hoped that later on, Inco will use Indonesian people, not as like as other factory who make for their fund in Indonesia but their employee dominated by foreigners.

4. THE DEVELOPMENT OF HOUSING AND TOWN IN SOROAKO

4.1 The Development of Town Scale

The development of some kinds of program committed in *Sorowako*, East Luwu Region is one of developing process as an effect to the policy of the development of the mine of National mine in the presence of multinational factory. PT International Nickel of Indonesia which has significant role for the the development of housing and village, the structure of form of the land. Continually, the policy has been coming true with the prove that the development of any elements of *Sorowako* such as the build of some buildings and other facilities that are directly as to live there. Furthermore, the development of mine of Inco and housing which increasing sharply appears giving significant effect to the development of other town particularly to the two cities near, *Wasuponda* and *Wawondula*.

Figure 4. Exisisting of Sorowako Town in 2007

The policy which finally looks *Sorowako* as the center of mine industry with many kinds of facilities give any consequences to the physical building of the town that we can see with a bit of change to the facilities such room or any facilities supporting the business and tourism. Those sectors improved along with the town activities which getting crowded like in the sea shore area and others shopping market go along with the human needs which is getting more and more. In tourism sector, we can see lake, mountain and the town that has been completed by the recreation facilities.

Some kinds of facility development has been done by the government, PT Inco and the people around, and the facilities are: the street to the town, the building of any kinds of social facilities, economy like: airport, harbor, waste handling, market, hospital, school, shopping center, gazebo, sport field, housing of Inco staff and housing was build by private factory and PT Inco.

By notice at the rapid growth of the development which result a small town with the complete facility, we may say that the town can be compared with a big town. However, it is a poor thing that with the rapid development of the town there left a place included a slum town in the main town. It is not an

absolute thing that it can not be handled to go to the presence of holistic, synergic and notice at the ecology aspect of the town.

The development of *Sorowako* town from the facility, it is appear that there always any development proved by any kinds of great building which are crossing to the east side of the town or *Sumasang* area and also any kinds of facilities in the center of the town. The process never ended lately so there must be a good plan to handle the development in the near future.

The development can effect both positive and negative include its facilities and society. In order t handle the development of the land area, in 2007 the master plan of the town development of *Sorowako* which take the land development and the unit of housing as consideration.

4.2 The development of slum area in the town

The purpose of the developing of the slum area quality is based on the president instruction No 5/1990 about the line of action in renewing the slum area in Indonesia, 1) the develop of life skill and job work skill, right and honor of the society to get proper housing around the clean and comport place 2) make a housing area that is well organized and be based of its function according to the town development line's of action 3) support
the efficiency of land using, build the property, ease the presence of facility around the land and also reduce the low income people.

Showing the role, the government (stakeholders in governments) in *sorowako* had been done the activity to increase the low resident especially in Nickel Village by using some strategy, some of them:

a) Arranging the resident of citizen. This is strategy done by government to use the area efficiently. In the all lake bank, so the potency houses oriented to the lake.
b) Developing and increasing the street to resident, especially to the empty area and area that possible making house in it.
c) Developing a meaning facilitate such as: drainages, water, electrical network, sanitation, and politically for garbage. The water and electrical was helping from PT Inco for citizen.
d) Developing of some social facilitate such as an area for praying facilitate, office/auditorium, garden, trade.
e) Developing on area for accommodate some house that built and illegally then recommended to more from the Nikel village. This aims to anticipate low resident in *Matano* lake. Before relocated happen, the local government and PT. Inco Tbk prepare an area in lake in edge Sumasang which had been arranged theirs position and complete with theirs developing of the street.

In this development program above, some most of them had been done, except arrange the houses and impose street, and relocated the houses that have illegally built in. Now the illegally location to build house had fulfill by the citizens. But most of them are new comers and have a good salary and build a luxury house in it. The illegally citizen get the land bussed from the local citizen. Infact has sold area for it government then they back to dwell to the previous placed location by reason to close with where to work or downtown. This failure program, assumed caused less of applying law that support every step and activity of that program. Besides, it is also influenced by late preparing of master plan of laying out of town and place as sample of building enforcement since the program is done, so it impacts to law applying. The master plan has just arranged in 2007 whereas that program has done since 2005.

Figure 5. The Existing New Settlement in Sumasang

4.3 People Perception In The Town

Aspiration of people is selected through giving questioner toward 54 samples of people in Sorowako. The question is how to give toward the people capital needs like work need and facility to leave in *Sorowako*. From that question generally they respond as to capital need reaching in dwelling or working in *Sorowako* has been good though not considered very comfortable yet. The unreached thing is still can be found one of populated urban dwelling from surrounding. More clearly the aspiration can be seen in the table and chart below:

Table 1. Degree of Work Capital Need/Dwell in Sorowako

No	Capital needs	Very good	Good	Enough	Bad	N
1	House condition	8	31	13	2	54
2	Environment health condition	7	33	10	4	54
3	Faso sect condition	4	32	13	5	54
4	Security (criminal)	8	41	3	2	54
5	Security (flood/eruption)	12	39	3	0	54
6	Neighbor relationship	10	42	1	1	54
7	Proud to leave	10	40	3	1	54
8	Actualization opportunity	9	25	19	1	54

Resource: Result of survey, 2006

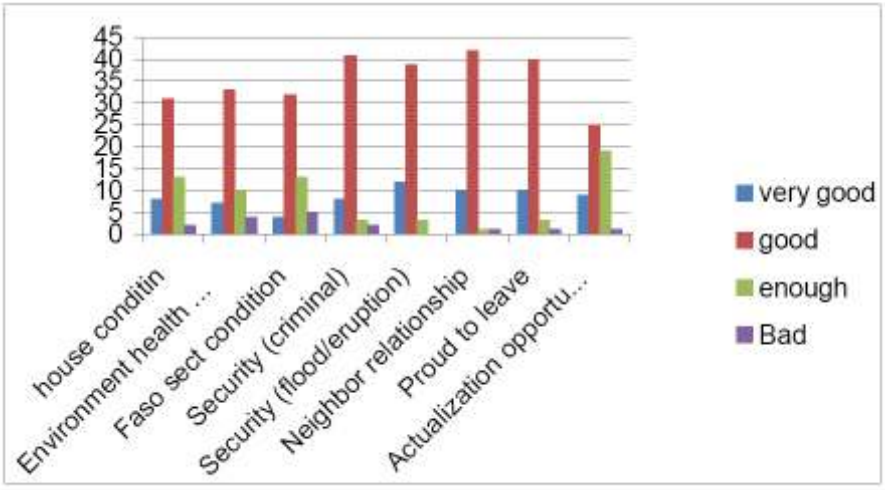

Figure 6. Diagram of degree of work capital need/dwell in *Sorowako*

5. THE IDEAS TO INCREASE THE QUALITY OF SETTLEMENT AND URBAN OF *SOROWAKO*

The explanation shows some ideas of Sorowako's development in order to increasing the quality of urban:

1) An area for business centre with the faster of growing.
   Exciting area with the compact citizens and it's growthness of commercialism faster than other areas, is good to be focus on social and commercial sector. This is caused by the change of the value from non commercial to the commercial things. To minimize the load of town centre, social and economic activity are better is was transformed or directed to the side of town centre (e.g settlemet). This is aims to give the cities service by democratize. Therefore, some of commercial facilities were directed to the developing of east of town.

2) Staff PT. Inco's house in west of the town
   This area relativity are good, orderly, and beautiful. In order that, this area completed with environment facilities, administration offices, and traveling facilities. Therefore, to hold out all the function of these facilities is good attitude.

Figure 7. Staff House PT Inco

3) Slum area in edge of *Matano* Lake
   The change of function of side from real settlement and traditional to the commercial settlement activity sector, and old settlement in Nikel Village, has many potential to change this area from high area to the low area.

Figure 8. The face of illegal settlement in Nikel at 2007

To keep this settlement balance to another area, that can be used to keep it up is are: to complete the facilities which still need to be completed, to arrange and to move the illegal build to the exact area. Side of lake, and focus the developing to the lake with waterfront town oriented. This strategy will know other section of business, and increasing the function and activity of the area and all of these will support other esthetic and identities of *Sorowako.*

4) A Settlement area in The Sumasang to relocated the housing in Nikel Village.
   The settlement must be arranged based on the arrangement standard of the housing, which has completed with facilities. To get the relocated goal from slum/illegal area in nickel villages, it needs to take the focus on it's plan, and it only can be done by the local government, making clear role and must be applied with cooperate a clear role.

5) A new area all river edge of *Matano* Lake to the *Sumasang*
   The part of level land all river side of the lake, has been a resident this area as strong alternative to a develop the settlement. Because it position has same sources and has potential for fisherman/tourism business, etc. The important this is the environment of the area must be kept in order to keep the forest and water of the lake.

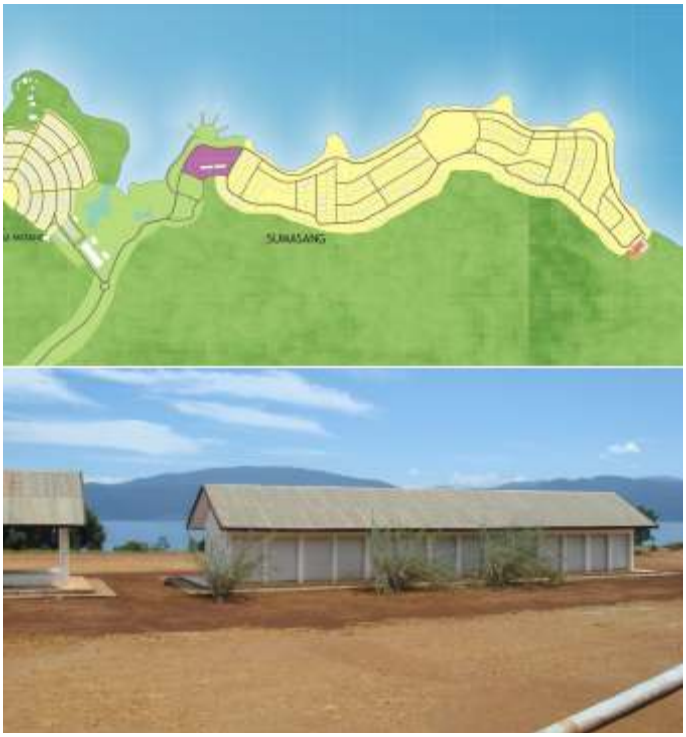

Figure 9. The new Setlements and Facilities in Sumasang**.**

6) Range hills area of P.T. Inco Tbk in south of town
   Range of hills area today, still many empty area which each empty area has high potentially and can be developed to be a animal husbandry, field and plantation and these can keep the environment.

7) Community empowerment
   The goal of developing of the cummunity empowerment in *Sorowako* is to get the citizens of participation in development. This less or more than been created either planning process, realization and keeping the development. Except that, the government tried to increase the human empowerment by increasing the education and skill to local oriented. Any infestation can be done by the local citizens such as agriculture, plantation, mine trade, fisherman, trade, tourist business, etc. by the having the goal of development, human resource has given positive effect to some aspect, some of them: a) Increasing total of number of professionals staff. b) Developing of the education and skill. c) Increasing economic sector either formal and informal.

Figure 10. Community involve in Development

6. CONCLUSION

1. Showing the potential, function and sorowako town, it is best if this area can be developed to be a town with capital function are as resident with the mine sector, agribusiness, and tourist business.
2. Designing sorowako town (It shown master plan sorowako), must be oriented to balancing oriented. Synergists among government, PT Inco, and citizens, and than ecologic aspek. In it's process, must the technical role which had been agreement to all stokehold must completed.
3. Slum upgrading program in Nikel settlemet has be done with the program as shows bellow: a) Rearranged the slum settlement and road way, b) To built of environment utility, c) To created some illegal house in the lake to the nice area in Sumasang. (The last program last not done be cause weaknesses of the law isn't it's application)
4. Every stage of the development it is better to involve all elements of citizens (citizens, government, staff of PT. Inco, and other entrepreneur) to get efficient and effective result.
5. Some solution that has been suggested to the increasing the quality of the town and *Sorowako*'s settlement area: keep the social economic facilities to the all area for efficiency and effectively of serving, arrange area must be maintenance the function, slum upgrading settlement has synergic with tourism, increasing new settlement must to watch the sustainable of the town out, the rehabilitation or using empty reason mine, and maximize the using the endeavor citizen.

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River Corridor Spatial Planning for Urban Ecotourism Development at Ciliwung River - Jakarta[13]

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ABSTRACT

River in the urban area is a nature resource which has high environment and visual value. But, this value cannot be created since the upstream and river bank are not in proper arrangement. Some of the river banks in urban area have been covered by houses which generally from lower economic social life or categorized as poverty area. This research has purpose to arrange and develop the river corridor in urban area to be an urban ecotourism area. Through this arrangement, we hope that besides there will be an income increase for river bank community and also will increase the quality of water environment and its corridor to be better.

To analyze the data we use the qualitative descriptive method by scoring and spatial method by using technical overlay. The data has been categorized by biophysical data, tour and support data of community that has been collected in 11 locations along the river. The result is shown that most of (73%) river plain has medium classification, 18% is medium and the rest is lower. Next area has been zoned with natural ecotourism concept, semi natural and support.

Keyword: Corridor Of River, Spatial Planning, Urban Ecotourism

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1. INTRODUCTION

Ciliwung is the longest river in West Java that passing through in the middle of Jakarta. The river that curves naturally and the flood plain topography is hilly on the headwaters is a potential place to be developed as tourism resources. As we may aware that river in urban area can be a *focal point* or a complete element that can increase the landscape quality. The culture social activities and community economics have developed along the river bank. Ciliwung has also important history value when in XVI century this river had became the gate and as a main transportation from Sunda Kelapa Harbour to Pakuan Padjajaran Kingdom in Bogor. (Santosa 2006).

The aspect of biophysical and the history of Ciliwung are a high tourism potential to be developed. Besides as a tourism area, the development of Ciliwung can give some economics opportunities for the community and increase the Territory Government income.

Eventough, the work to develop the river as a tourism area found many obstacles, especially connected to the dirtiness in the area of the river, such as population density and cleanliness. Together with community development and their necessity, there are many lands near the flood plain that have changed their functions to be some locations for residents, business, garbages etc. These conditions give some negative impacts to the physical environment condition, water quality and river environmental aesthetics quality. Reducing of water quality and bad condition of the environment along the river corridor, especially the density and slum residents, will give bad image to Jakarta.

Until now, the Central Government and Territory Government can do for Ciliwung is only searching some concepts of management that related to physical repairing, community involvement and physical treatment in season such as cleaning the river from the garbage on some certain areas.

The main objective of this research is planning Ciliwung corridor spatial for urban ecotourism development. Specifically it covers (1) potential identification of resources area for ecotourism development, (2) potential analysis tourism resources area and community support. We hope that with the existence of ecotourism activities on Ciliwung corridor will be increasing the community economics. This also can impact the increasing of environment quality and manage the river environment well.

2. METHOD OF RESEARCH

The research was done along the river corridor (± 55 km) in Jakarta started from Srengseng Sawah (upstream) to Marina Ancol (downstream). The Border of research area was ± 250 m on left side and right side of the river

counted from river as (PROKASIH 2005). The field observation has been done for two months from January to February 2007.
This research used the quantitative descriptive method that consisted of three Phases as follow:

2.1 Phase of Collecting and Clasification Data

This phase is a data collection and classification. The collected data is devided in two sections which is Primary Data, collected through field observation and some interviews by using quesioners on stake holder. Second, the received Secunder Data based on book study.
Observation was done in 11 locations along the river corridor in Jakarta, sistematically determined in every 5 kms. The interviews were made to 100 local people, 20 people from 8 related instistutions, 4 people from Non Goverment Organization (NGO) and 4 people from Travel Agent.

2.2 Phase of Analysis

This phase is an area potential evaluation for ecotourism development and devided in three sections which are local community development potential evaluation, river biophysial condition evaluation and tourism object and existing attraction potential evaluation.

2.2.1 Local Communities Development Condition Potential Evaluation

The Community development potential is evaluated from community acceptability level to ecotourism development in their area, and local community preferences to economical opportunities in a planned ecotourism area. The evaluation was done by respondents (n=100) that chosen by random in every observation location with modification formula by Yusiana (2007). The result was very potential, potential, and not potential zone. Table 1 and Table 2 show the community development potential evaluation.

Table 1. Community Acceptability Evaluation to the Ecotourism

Criteria	Category	Value	Scoore
Development area as a tourism area.	• Sure	4	S1
	• Fair -	3	S2
	• Not sure	2	S3
	• Don't Know	1	S4
Ecotourism at Ciliwung river can increase the enviroment quality	• Sure	4	S1
	• Enough Sure	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
Ecotourism at Ciliwung river can increase the Community prosperity.	• Very Sure	4	S1
	• Sure	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
Ecotourism at Ciliwung river can increase the fasilities and the infrastucture.	• Very Sure	4	S1
	• Enough	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
Community desire to be participated.	• High	4	S1
	• Medium	3	S2
	• Low	2	S3
	• None	1	S4

Source : Yusiana (2007); modification.

Table 2. Type of Participate the Community Desired

Participation of Tourism Direct	Participation of Supporter Tourism
a. Become employees, tour guide	e. Tourism products supplier
b. Opening shop, restaurant, lodging	f. etc
c. Developing tourism objects and attractions	
d. becoming farmer, breeder	

Source: Yusiana (2007), modification.

2.2.2 River Biophysical Condition Evaluation

River biophysical Evaluation covers PROKASIH river structuring border area which is 250 meters width to the left and right from river as. Ciliwung River Biophysical Condition Evaluation is based on modification parameter that source to USDA (1968) and BPLHD Prov. DKI Jakarta (2005), as written on Table 3.

Table 3. Parameter in Analyzing Ciliwung River Biophysic Condition

Criteria	(%)	Sub Criteria	Value	score
River Floor Plain				
Landslide Factor (Fbl)	25	• 0 – 8%, not potential to slide	4	S1
		• 8 – 15%, less potential to slide	3	S2
		• 15 – 30%, enough potential to slide	2	S3
		• > 30%, very potential to slide	1	S4
Flood Factor (Fbb)	25	• Never	4	S1
		• Flood 1x within 5 years	3	S3
		• Flood >1x within 5 years -< 1x within 5 years	2	S3
		• Flood >1x within 5 years	1	S4
Land Use Factor (Fpl)	25	• Suitable, good condition	4	S1
		• Suitable, less condition	3	S2
		• Not suitable, less condition	2	S3
		• Not suitable, bad condition	1	S4
Water Quality				
Water Colour Factor (Fwa)	30	• Clear brown	4	S1
		• Brown	3	S2
		• Dark brown	2	S3
		• Black	1	S4
Water Debit Factor (Fda)	30	• No fluctuation during rain season & dry season	4	S1
		• Small fluctuation during rain & dry season	3	S2
		• Medium fluctuation during rain & dry season	2	S3
		• High fluctuation during rain season & dry season	1	S4
Sedimentation Factor (TDS, TSS) (Fsed)	20	• Material Quality I	4	S1
		• Material Quality II	3	S2
		• Material Quality III	2	S3
		• Material Quality IV	1	S4
Chemistry Quality Factor (COD, BOD, DO) (Fka)	20	• Material Quality I	4	S1
		• Material Quality II	3	S2
		• Material Quality III	2	S3
		• Material Quality IV	1	S4

Note : Score (S1=very suitable, S2=suitable, S3=less suitable, S4=not suitable)
Sources : BPLHD and ASDEP urusan SARPEDAL KLH (2005); USDA (1968); modification.

River Flood Plain Condition Classification Enumeration =
(Σ Fbl x 25) + (Σ Fbb x 25) + (Σ Fpl x 25)
Note : Σ = 1 to 11 locations
River Flood Plain Quality Level devided in high (226 – 300), medium (150 – 225), low (75 – 149).

Water Condition Classification Enumeration =
(Σ Fwa x 30) + (Σ Fda x 30) + (Σ Fsed x 25) + (Σ Fka x 25)
Note : Σ = 1 to 11 locations
River Floof Plain Quality Level devided in high (300 – 400), medium (200 – 299), low (100 – 199).

The result of river flood plain condition evaluation and water condition Evaluation is merged to get a potential biophysical level from every observation location to be developed as ecotourism area. Potential classification level ecotourism area is created in zone map; very potential (526–700), potential (351–525), and not potential (175–350).

2.2.3 Ecotourism Object and Attraction Potential Evaluation

The ecotourism object and attraction potential evaluation has done in 2 Phase. The first phase, evaluated object potential level and existing tourism attraction. This evaluation was done by 11 respondents from BAPPEDA Provinsi DKI Jakarta, Dinas Pariwisata DKI Jakarta, and travel agent using parameter modification result from Inskeep (1991) and Umar (2005). The first phase result evaluation, then continue to the second phase, is a tourism object and attraction feasibility level evaluation. This evaluation uses the parameter of modification result Inkeep (1991), Yusiana (2007), and Bappeda Kabupaten Malang (2006) dalam Prasasti (2008), shown on Table 4.

Table 4. Parameter For Tourism Object and Existing Attraction Feasibility Evaluation

Criteria	(%)	Sub Criteria	Value	Score
Tourism Object and Attraction Factor (Foa)	30	• All tourism attractions value are high.	4	S1
		• Existing tourism attractions value are Medium – High .	3	S2
		• Existing tourism attractions value are low – Medium	2	S3
		• No object and no attraction.	1	S4
River Ecology Factor (Fek)	30	• Endemic, good Ecology unit	4	S1
		• Semi endemic, good Ecology Unit	3	S2
		• Destroyed Ecology Unit	2	S3
		• No Ecology unit	1	S4
Accessibillity Factor (Faks)	20	• Primary road, easy access, good condition, various public transportation.	4	S1
		• Secondary road, medium condition, limited public transportation.	3	S2
		• Tersier road, medium condition, no public transportatic	2	S3
		• No access, no public transportation.	1	S4
Main road Location factor (Fjl)	10	• Close by (<1 km)	4	S1
		• Medium (1 – 3 km)	3	S2
		• Far Enough (3 - 5 km)	2	S3
		• Very Far (>5 km)	1	S4
Criteria	**(%)**	**Sub Criteria**	**Value**	**Score**
Available Tourism Facilities factor (Ffas)	10	• Available, complete, good quality & well maintenance.	4	S1
		• Some, enough maintenance.	3	S2
		• Some, less maintenance.	2	S3
		• Not available.	1	S4

Note : Score (S1=very suitable, S2=suitable, S3=less suitable, S4=not suitable)
Resources : Inkeep (1991); Yusiana (2007); Badan Perencana Kabupaten Malang (2006) in Prasasti (2008); modification.

Object Feasibility Condition Classification and Tourism Attraction Enumeration =
(Σ Foa x 40) + (Σ Fek x 20) + (Σ Faks x 20) + (Σ Fjl x 10) + (Σ Ffas x 10)
Note : Σ = 1 to 11 locations. Classification of Feasibility Object and Tourism Attraction is Very Potential (300 – 400), Potential (200 – 299) and Not Potential (100 – 199)

2.2.4 Ecotourism Spatial Development Planning

The latest is a synthesis phase which is grouping the local community development potential zone, the river biophysical potential zone and the tourism object and attraction potential zone. The group of those zones is using overlay method with *software Arcview ver 3.3* so it produces a potential ecotourism spatial development planning. The integration result is a spatial planning that has high, medium and low category for Ciliwung river corridor ecotourism development in Jakarta.

3. CILIWUNG RIVER CONDITION IN JAKARTA

Ciliwung river in Jakarta is part of Satuan Wilayah Sungai (SWS) Ciliwung-Cisadane that has 117 kms length, and river basin (DAS) that has ±337 km^2 width (BPLHD Prov. DKI Jakarta 2001; Departemen Pemukiman and Prasarana Wilayah & Dutch Government in 2004). The upstream Ciliwung is in Gunung Pangrango, Jawa Barat, dan its downstream is Laut Jawa, Jakarta.

Based on research result of Departemen Pemukiman and Prasarana Wilayah in cooperation with Dutch Government (2004), Ciliwung river of downstream was devided in three areas; the upper side of the downstream covered Depok to Manggarai with condition that dominated population economy is service, tradings, small industry (tofu, cassava crispy and bread) and fabrica. Next is middle Ciliwung started from Manggarai to Pasar Baru with condition that dominated population economy is informal sector (workers, scavengers, etc) and home industry (tofu and tempe). Last is lower Ciliwung started from Pasar Baru to Teluk Jakarta, dominated with formal sector and trading.

Next, this research also revealed that bad physical condition of Ciliwung river is influenced by change of land utilization at DAS Ciliwung headwaters, and also because of change of land use on Garis Sempadan Sungai (GSS) on the downstream area. The most dominant is green land area had changed to be a place of houses. With those changes, the river physical environment become dirty and had bad quality.

The population density along Ciliwung corridor in Jakarta generally is quite high, especially in the middle of downstream area. Based on Badan Pusat Statistik (BPS 2006) that rate level of population density in every district that passed by Ciliwung is 14.791,49 pax/km^2 which is the ideal density standard in urban area is 130.000 pax/km^2.

4. RESULTS AND DISCUSSION

4.1 Acceptability of Local Community

In developing urban ecotourism at Ciliwung corridor as improvement slum environmental quality, we need local community involvement. Refer to Kodhyat (1998) statement that ecotourism is a tourism activity event that responsible to natural places and/or resorts based on natural rules in supporting environmental conservation and increasing local community prosperity.

Evaluation to community is devided in two parts, first is to see community acceptability to ecotourism development in their area. Second is kinds of participants needed by community in the ecotourism area. Community involvement is very important in developing ecotourism as Nasikum (2000) has said that tourism development on community basic has an opportunity to survive as the existing object and attraction development in a small scale that managed by community and local business so it is easy to be organized and not give much negative impact.

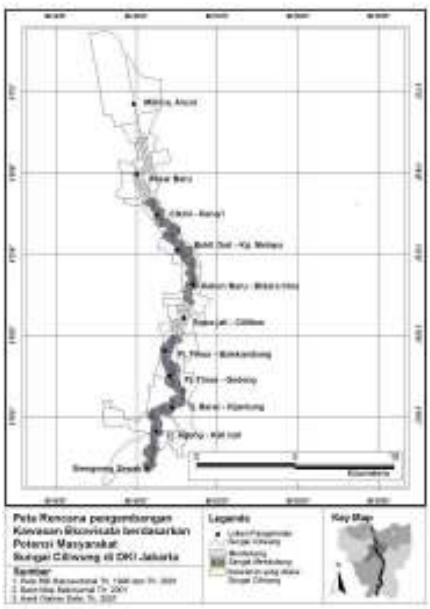

Figure 1. Map of Ecotourism Development Pursuant to Community Condition.

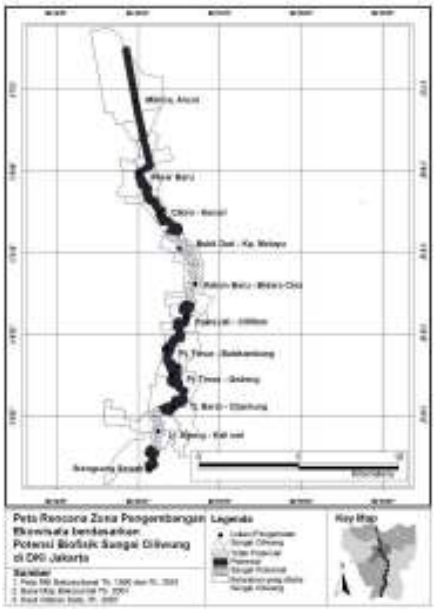

Figure 2. Map of Ecotourism Development Pursuant to Biophysical Condition.

Based on acceptibility evaluation and participations of local community preferences, generally we got some positive responses. High community interest could be seen from community preferences to some kinds of participations that related to ecoutourism activities such as be an employee and a tourist guide, shop business, hotel, restaurant, arts and other tourism attractions (Figure 1).

4.2 River Biophysical Condition

Biophysical is one of important aspect that needs to be noted in developing ecotourism area. Biophysical evaluation on Ciliwung river corridor is useful to know the potential level and the damage in every element. From the evaluation, we can make a planning of improvement program and environment management. From the joining result for river flood plan and water quality evaluation, we know that 73% of that area is a potential location. In this location, we need to do some improvements for environment quality. The rest is 27% is not a potensial area. This area needs a high level of improvement. (Figure 2).

Generally, the main rehabilitation of Biophysical along the river corridor is improvement program and used land restructuring along GSS. This program automatically also can increase water quality and reduce the flood.

With the improvement, the environment will be good, then it will give some comforts to the visitors, safety and prosperity of local community.

4.3 Potency of Existing Tourism Object and Attraction

One of factor that become a center point for a succesful tourism event is the availabity of potential tourism source. Inskeep (1991) said that motivation and desire are support factors for tourists to do their travelling, which the attracted factor can be a unique resort or places that provides tourism object and attraction. From the field observation and book study, we know that there is 23 objects and attraction along Ciliwung corridor that devided in 65% is building structural objects and 35% is natural tourism objects and cultural. After some evaluations, we got that 96% is a potential that can be developed as tourism object and attraction (Figure 3).

4.4 Ecotourism Spatial Planning

To get spatial planning for potential developing is based on arranging result of biophysical condition, existing tourism object and attraction potential, and local community support. This classification zone has a purpose to determine ecotourism development area center. The result shown that most of locations (73%) is classified medium, two locations (18%) is classified high and only one location in the middle is classified low (9%). Figure 4 shown ecotourism potential spatial area.

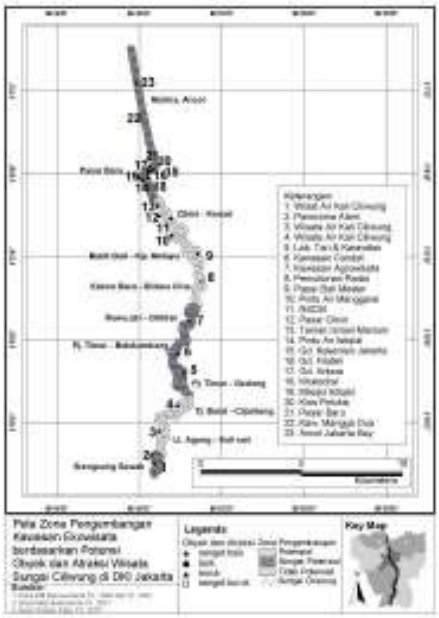

Figure 3. Map of Ecotourism Development Pursuant to Object and Attraction Condition.

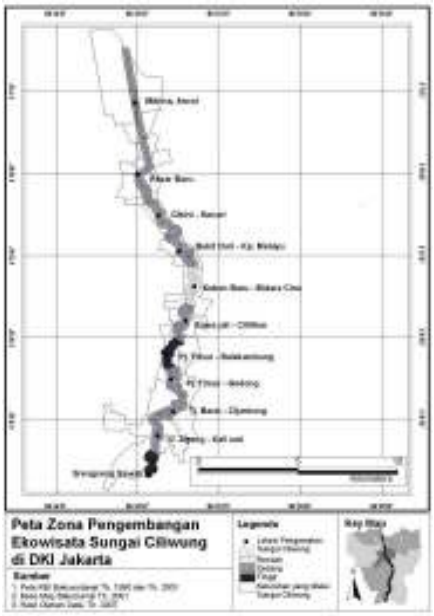

Figure 4. Spatial Planning for Developing Ecotourism Map on Ciliwung River

5. CONCLUSION

In spatial planning development at Ciliwung corridor to be an ecotourism area, community support, environmental condition and the existing tourism resources have the important role. Acceptability and community involvement will help the ecotourism persistence in this area. Besides that, they also get the benefits that can increase their prosperity in economical way and environmental improvement. Good condition of river be able to be developed as ecology tourism. Meanwhile, tourism resource that is tourism object and attraction can be a power of attraction for tourists to visit this area.

From overlay evaluation result, we know that with some improvement programs, most of the area (91%) at the river corridor is quite potential for urban ecotourism development. The improvement program more preferably on increasing the river environmental quality and management. So ecotourism development at Ciliwung river corridor can be sustainable and in good management.

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1 - 15

URBAN ACUPUNCTURE: AN ALTERNATIVE

Purposive intervention to urban development to generate sustainable positive ripples for an 'Aided Self-Help' Kampung Improvement

Triatno Yudo Harjoko

ABSTRACT

Urban kampung has been a latent problem that in itself is an urban reality. Both central and local governments have attempted various policies as well as schemes to solve urban kampung problems; however, they have not been successful in terms of the sustainability of the kampung lives. Kampung settlements are continuously suffered from self-destruction that endangers people as well as their natural living environment. The famous project of Kampung Improvement Program (KIP) has its own success story in terms of approaches towards urban development. However, it has a serious flaw that it simply focused on 'public work approach' that has nothing to do with human life and its space, the life-cycle space within urban kampung. Urban acupuncture will be put forward as an alternative solution of urban problems that are based on Lerner's approach - the very principles of acupuncture that the lines of action must be simple, produce an immediate effect, at reasonable cost and applicable to any situation to facilitate the daily life of citizens as well as to cope with urgent needs, be it in the heart of cities or in peripheral areas. This paper will discuss urban acupuncture as an alternative approach to urban strategy especially in dealing with the acute development of urban kampung. It will critically analyze the existing strategies to overcome continuous densification of kampung, especially KIP, high-rise housing as recently announced by the central government. It will focus on life-cycle of the kampung people that demands careful understanding, sui generis.

Keywords: urban kampung, kampung improvement, urban acupuncture, aided self-help, participatory development.

1. INTRODUCTION

1.1 Background: Upgrading

While at the same time many of the government of the developing countries had very limited resources available, they fallaciously conceived housing problem of the poor as material issues ('what is') and tried to place them as a provider to solve it. Later it was realized that capitalistic, industrial approach was inaccurate if not erroneous. As pointed out by Skinner *et.al.* (1987) "by the mid-1970s many government of developing countries had accepted that they would be unable to meet the housing needs of their low-income populations through the provision of contractor-built units, which had hitherto been the policy norm. This policy had simply led to a widening of housing deficits as decaying housing stock and population growth outstripped construction at an ever-increasing rate." This situation has urged the developing – upgrading. The government acts as enabler.

Shelter upgrading in Indonesia known as *perbaikan kampung,* or kampung improvement. Historically, this approach had already initiated in the Dutch colonial period called *kampung verbitering*. Kampung traditionally is a communal or common property – under the *adat* laws. In the urban land issue, this type of tenure has been much more problematic than

1.2 Kampung Improvement Program (KIP)

Since its initiation in the late 1960's by the then Governor of Jakarta Ali Sadikin, Kampung Improvement Project (KIP) has not yet given any significant change to the life as well as living condition especially those of the poor. John L. Taylor (1987), in his research during the years 1979-82, on this Evaluation of the Jakarta Kampung Improvement Program indicates main features of the KIP (Taylor, J.L., 1987:40): i) the program's inputs consist entirely of physical facilities without any direct social or economical components; ii) roads and walkways account for at least two-thirds of total expenditures in most kampungs; in contrast, water supply is generally less than 20% and sanitary facilities below 5%; iii) inputs are provided on relatively homogeneous basis; that is, there is little room for much variation in type and standard of facilities in this massive 'public works' approach; iv) the program has made no attempt to deal with the issue of land registration nor to grant legal title to land for kampung residents; v) the program has also made no attempt at direct cost recovery; any increase in local revenues takes place indirectly through an expanded property tax base with housing improvements.

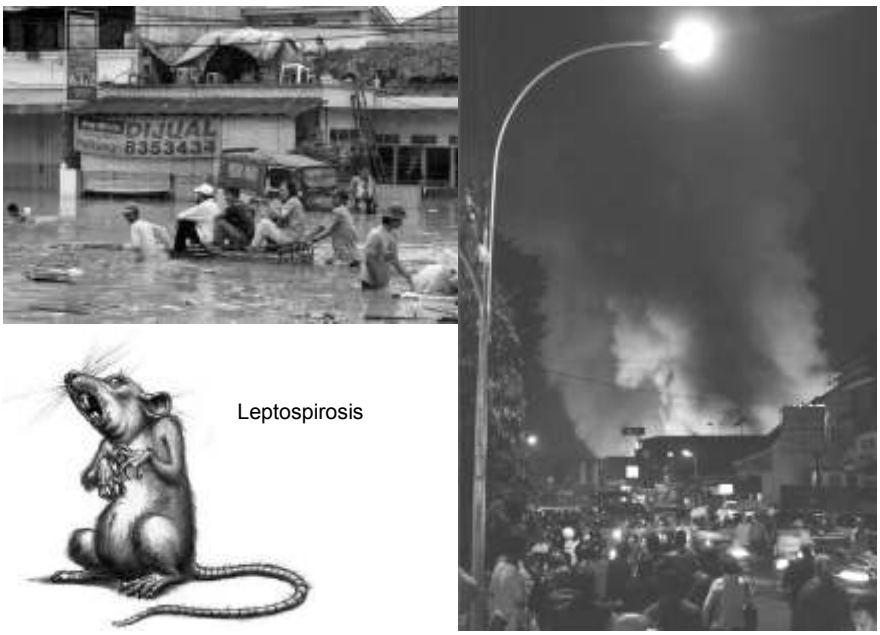

Figure 1
Persistent "Urban Tragedy" over Kampung Settlement

Increasing population growth especially those of the poor that are mostly rural migrants with no appropriate skills needed simply rely on kampung as their affordable destination for living in the city. They are urbanized in their own terms based on their traditional norm and values. Indigenous people of urban kampung responded this demand for affordable housing for these migrants especially those of industrial ad construction workers as well as the following individual 'investors' in the bazaar economy.

Until recently, kampung and its KIP were conceived as an isolated 'urban project' or improvement that has no direct integration to the functioning of the city as a whole. In fact, kampung settlement, firstly, provides affordable housing for those of poor unskilled of whom the city needs them. Secondly, actually, kampung has developed as a 'city within city'; it has its own social and economic entity that has never been incorporated to city system.

Unchecked densification process and uncontrolled development make matters worst and lead the kampung to tragedy – recurrent fire disaster, floods that cause a loss of life and property; outbreak of various diseases result from crowding, poor sanitation and clean water supply.

2. URBAN ACUPUNCTURE: LESSON LEARNED FROM CUTIBA, BRAZIL

The term is coined by the then Curitiba mayor, Brazil, Jaime Lerner. As the name suggests, it involves pinpointed interventions that can be accomplished quickly to release energy and create a positive ripple effect. There are four urban functions targeted as acupuncture points: transport, recycling, affordable housing and urban parks. These are associated with the crucial idea of Eco-city or sustainable urban development. His film – *Convenient Truth* – seems to give an opposing image or idea over the Gore's *Inconvenient Truth.*

Urban transport could be conceived as blood, in the human body, that transports foods and oxygen needed for metabolism process. It maintain all body organs to function properly. In the anatomy of a city, transport maintains the life of the city – especially the economy.

Recycling is an acupuncture point that primarily saves the city from waste hazard and in return it also generates economic opportunity for the poor. It stimulates remarkably participation of the poor to work together with local government and the private sector to change waste into 'nutrients' that are consumed by the industry. The city grows healthy.

Affordable housing is not confined to the provision of simply housing units in relatively remote areas. It includes provision of the urban economic activities and public facilities that bring the housing area simply beyond a dormitory place but into a sub-urban life and environment.

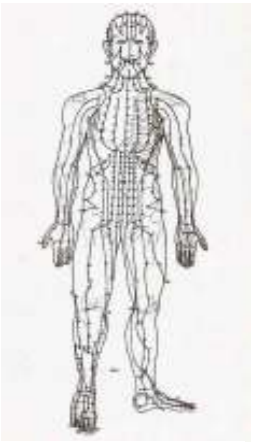

Figure 2
Acupuncture
Meridians

Urban parks are designed, firstly to solve flood problems by resettling the people into a saver place; secondly, it helps the city to increase green ratio. Before the scheme introduced, Curitiba had a very little green space ratio of about 0.5 m2 per person. After the development of urban parks, Curitiba manages to increase this ratio to 60 m2 per person (compare to standard provided by the WHO of 16 m2 per person).

3. URBAN ACCUPUNCTURE IN INDONESIAN CONTEXT AND KAMPUNG

Acupuncture points in the human body are related to human internal organs such as lung, pericardium, heart organs, large and small intestine, liver and kidney. We apply this method to a city – similar to human body – that has 'internal organs' such as social structure and system, economic related organs (industry, services, information etc.), residential (maintain quality off-spring etc.). Therefore, urban acupuncture points could be identified as transport system, greeneries, waste, and housing.

I will discuss kampung here of that which is inhabited by a majority of poor people. This people constitute a unique urban community developed of various traditional traditions, such as *adat* or customary laws of different ethnicities from all over the archipelago. They restructure into a type of 'neo-tribal society', since they are not similar to their origins but in many ways maintain their traditional norms and values to survive in the city. They are in process of becoming toward a civil-society of which urban society should be constituted by means of 'social-contracts' (established formal acts and laws). This implies that understanding this type of society is to understand their cultures, hence, their everyday practices.

In this regard, kampung should be conceived as a 'city' of its own that exemplifies its social and economic structure as well as practices. They are not parasites instead give significant roles to the city, for example, construction workers, budget food vendors and stalls (*warteg*). Kampung should be treated as part of the conurbation development. Consequently, accessibility of kampung should be integrated into the whole city system.

Within such a framework kampung settlement will have a role as a part of such a city function of which planning practice denies this reality. Urban planning practice until recently has viewed kampung as a simply 'dormitory' – a collection of houses. The following is crucial acupuncture points for kampung improvement:

- *Accessibility*. It should be developed within the larger urban context of which it should provide framework toward a 'conurbation'. In the scheme, the transport system – a TOD system (Transit Oriented Development) – should be integrated with the kampung center development as a suitable local market, or otherwise the poor will find their own everywhere across the city.
- *Greenery*. It will subsume under the eco-urbanism that support *bio-nutrients* process of the urban environment as a whole. Ideal WHO standard of 16 square meters per person.
- *Aided-Self-Help Eco Housing for the Poor*. This scheme is especially crucial and addressed to ability of the poor to provide housing by themselves with the aid of the government and private

sector (CSR). The approach should be based on informal community structure (that may involve their patron such as land lord as well as the existence of the kampung 'mafia').

- *Eco-waste management*. The scheme should involve every individuals in the kampung to join the campaign of *trash is not a trash* – how to recycle waste into food or nutrients and, hence, incorporate private sector within the process and the poor have the benefit out of it – source of income as the Curitiba scheme has developed.

4. ACCESIBILITY

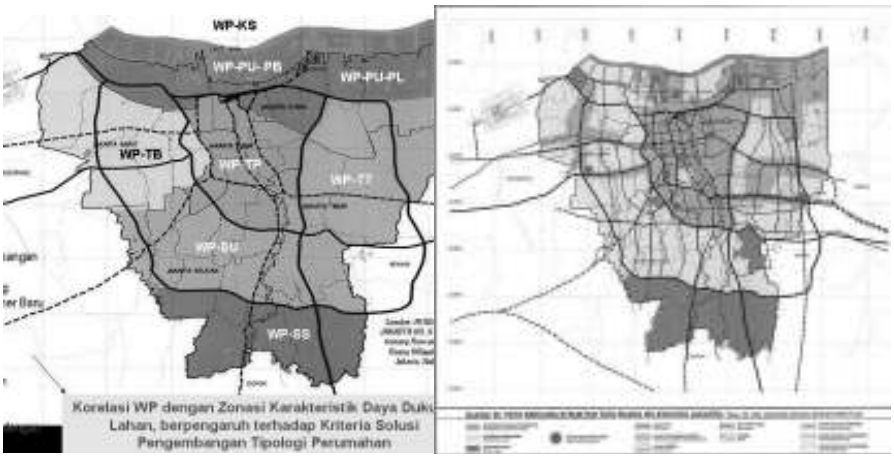

Figure 3
Structure of Jakarta & Its Settlement Patterns:
Over emphasis on road & unrelated settlement patterns over the transportation system
Dinas Perumahan DKI Jkarta, *Penataan/Perbaikan Kampung Terpadu.* Forum Permukiman, Januari 2009

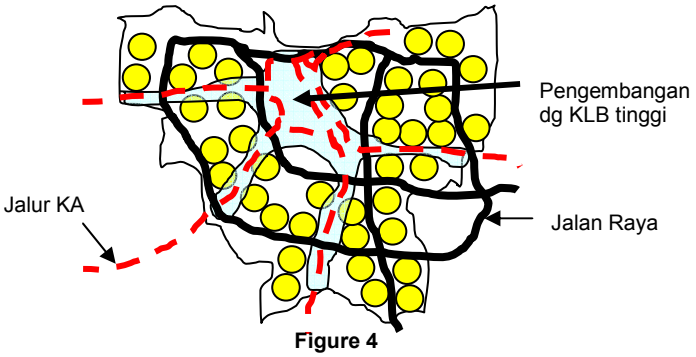

Figure 4
Ideal Urban Structure based on TOD
Settlement patterns including kampung and commercial high density development are integrated into transport system

Figure 3 and 4 indicate the actual and its 'ideal' urban structure of Jakarta respectively. Kampung as a unique structure of urban settlement should have been integrated into the whole system of Jakarta, not otherwise. In such a system or settlement pattern, hence, any sub-urban may have its own (unique) center of which it will function as a generator of the local economy appropriate particularly to its local people.

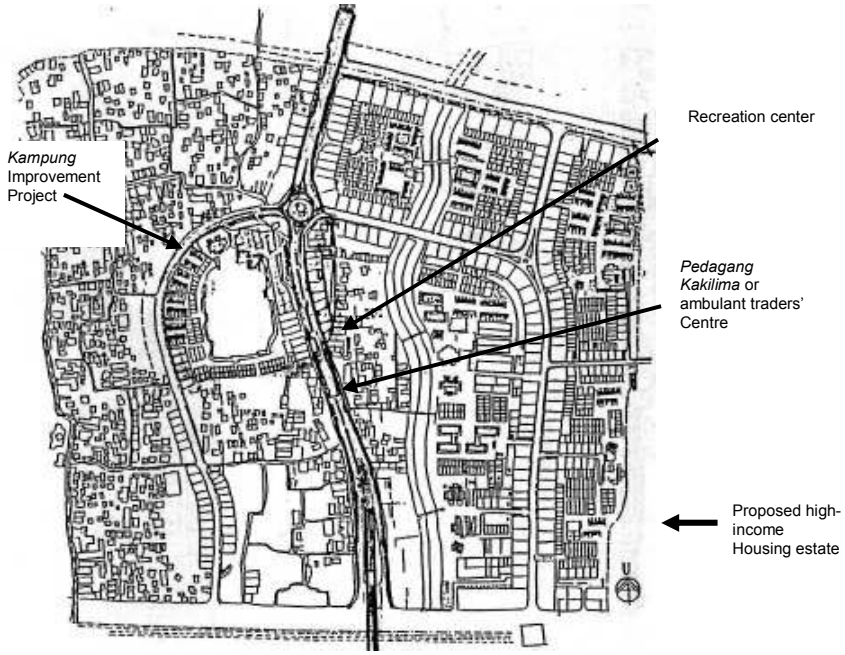

Figure 5
A Proposal of Guided Land Development in Klender, Jakarta : A Development Consultant's unrealised project.

This is a good example of the guided land development in Klender, next to the Penggilingan area, which incorporates *kampung* and new housing estate. Unfortunately, this scheme is left on the shelves. The housing estate as now present is a 'segregate community' for high-income settlements.

Source: Ismael, A., ' Guided Land Development: Klender, Jakarta', *Integrated Urban Development through 'Co-Development',* Triarco Development Consultants, Jakarta, Paper presented for International Workshop on Housing ' Urban Coherence and Housing Strategies', Bandung, 1990, Case 3

5. ECO-HOUSING:AIDED SELF-HELP HOUSING IMPROVEMENT, GREENERIES AND WASTE MANAGEMENT

Kampung settlement has its local knowledge and technology. Alien intervention – especially, capitalist or industrial production – toward its development may simply lead to petty capitalist commodity that excludes the poor migrants for affordable housing. Production process that involves labor and technology cause valorization, that is, increase value of commodity (especially house) – higher rents or price of houses. Aided self-help housing aims at suitable local resources, including labor, to assist the poor to improve their house.

Eco-social. The acupuncture point will be social ties. Kampung has its unique social structure of community that may not be the same from one to other. Housing improvement requires agreement among the kampung dwellers to change that may be regarded as social capital of the community. Participation should be considered in this sense. The role of NGOs, such as UPC, is paramount important. Local people have their own local knowledge and technology. Aid or intervention should act as empowerment and crucial resources for change. Reconstruction in Aceh has a lot of lesson to learn. Eco-awareness becomes crucial part of the improvement.

Eco-centric. This applies to those that relates to atmospheric and lithosperic intrusion or pollution – reducing carbon dioxide and chemical pollutants to the soils. Green needs carbon dioxide for photosynthesis process, while soil needs bio-nutrients to stabilize microorganisms within it. In this regard, both gas, organic as well as inorganic waste should be taken into account.

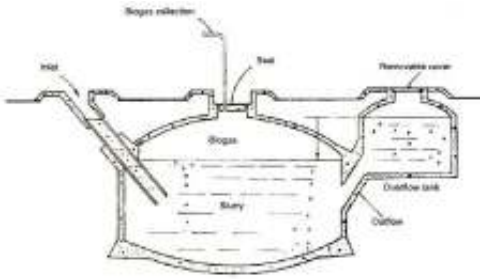

Figure 6
General Biogas Plant
Mahajan, n., *Move over Wind and Solar Energy, Cow dung is here to stay!* Ecofirend, http://www.instablogsimages.com/images/2007/09/21/rural-biogas-plant_179.jpg, 21.03.08

Organic waste could process into methane gas (biogas) that can be mixed with the green waste. Additional outputs of this process are compost suitable for farming (in England this is called allotments that individuals can rent on lot for their green house and small farming in the city). Therefore, kampung improvement could be geared toward a mini-urban agriculture within its housing development. A scheme similar to that which is developed by Antonio Ismael could be introduced.

Eco-housing. Highly dense kampung should be redesigned to provide a better life-cycle space. The scheme incorporates all eco-logics toward sustainable housing design – *eco-block*.

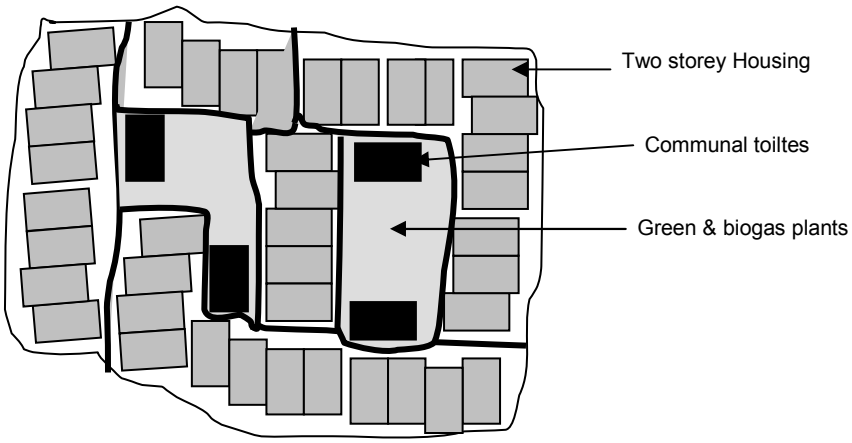

Figure 7
ECO-BLOCK of housing reconstruction within the upgrading program.

Figure 8

Qingdao EcoBlock

The Berkeley Institute of the Environemnt, *Sustainable Neighborhood "Eco_Block" in Chine,* http://bie.berkeley.edu/ecoblocks, 8.03.09

6. CONCLUDING REMARKS

Urban acupuncture addresses the urban activities or sectors that make the city functioning properly in terms of much broader sense. It should address both ecology of the city – its natural as well as human aspects. The acupuncture points will engender urban activities of the public, private and popular sectors.

Careful and wise intervention towards the poor, that is, of local knowledge, norms and technology, should be taken into account in order that the scheme will not cause adverse effects. Aided-self-help will then encourage and empower the poor to help themselves. Social ties and network of the community will help to disseminate the change and improvement

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1 - 16

The Most Suitable Method of Approach for Upgrading the Slum Urban Area in the Heritage Zone

Case Study Areas : Kampung Baluwarti and Kedung Lumbu

Bambang Triratma

ABSTRACT

Conservation is a complicated activity because various different people and institutions get involve in there. The method conservation has to be based on the resources within those conserved area, such as community. Community is an important part of an area that has to be involved intensively on the process of building the most suitable conservation strategy. Unfortunately, the government (local, central) was unwilling to let them involve in the conservation work of their area.

The establishment of slum urban areas within or nearby a heritage zone such as Baluwarti and Kedung Lumbu, was caused by an inability of the Keraton Kasunanan Surakarta and the Local Government of Surakarta in managing and controlling to the development of those areas. 'Top down" policy of conservation this heritage zone has not covered the area entirely, it has just focused on the main building within the area. Community within areas has not been given opportunities to participate in the program.

The aim of this research is to formulate the most suitable method for upgrading a slum spots by empowering its community/residents. The most important part of this research was the observation to find various factors of community which were able to be improved and to be integrated with the 'top down' policy of conservation. The main reason of choosing those two case study areas was their similarity of existing condition to other places in Indonesia, therefore, the results of this research will be able to be applied for those similar areas.

The most important conclusion of this research is that, the most suitable method of upgrading for urban spots within/nearby the heritage zone is able to be gained by empowering its community. They have to be involved intensively and actively in the process by giving them various opportunities to improve their capability especially due to conservation of their area.

Keywords: conservation, community, heritage, slum areas / spots, empowerment.

1. BUILDING THE METHODOLOGY

Methodology of this research was built based on the comprehension of interaction between three important aspects, these are :

- Human activities for meeting their basic need.
- Human activity is one of the main factor of establishment and spread of the slum areas/spots.
- Human is an object and subject of a conservation work to heritage.

Those basic aspects lead the method of research to the principle that human is a focus of process. Human an the living thing was given the ability to respond various challenges which come to them, including their efforts to fulfill their basic needs. There are two sectors of work field, formal and informal sectors. First sector is provided by government. Some serious problems have been hampered by the government of Indonesia in creating and providing the job for its people, therefore informal sector has become the main choice most of community. The government in all level (local, regional and national) has been unable to manage and to control the increasing of those informal sectors because of various complicated factors of the government itself; characteristic of area and its community.

This comprehension lead to the observation and identification of various activities of community in fulfilling their basic needs.

The establishment and spread of slum spots in most cities in developing country could not be separated with an urbanization. People went to the city for getting their job. Some of them have got their job, but a lot of them have failed so that they were unable to improve quality of their life. Those later group of people has stimulated the growth of slum spots/areas in the city especially at many urban zones. This comprehension lead to the observation and investigation of urbanization by identifying its mechanism and its destination spots within the case study areas.

Human as the resident of area should be involved intensively in the whole process of conservation of their area or nearby area. They have to be given opportunities for participating in some steps where they are able to empower themselves by applying and improving their capability which may build the synergic correlation with the conservation program. This

explanation indicated that the research has to observe some aspects of community and the strategy of conservation that has been carried out at the Keraton Kasunanan Surakarta Hadiningrat.

The results of analysis of three poles have been interacted lead to the formulation of some essences which become the conclusion and recommendation of this research.

2. KAMPUNG BALUWARTI AND KEDUNG LUMBU : THEIR CONTRIBUTION TO CONSERVATON OF THE KERATON KASUNANAN SURAKARTA HADININGRAT

The Keraton Kasunanan Surakarta Hadiningrat is one of the old historical traditional palaces in Indonesia that has declared as the heritage zone. It has many significances of local, regional and national historical and culture background. Therefore, this heritage building/area has become an important trace of the born and the development of nation and country of Indonesia.

As the historical traces, the Palace of Kasunanan Surakarta should be seen as a composition together with the nearby buildings and areas, such as the Fortress of Vastenberg, Pasar Klewer, Kampung Kauman, Masjid Agung, Kampung Baluwarti dan Kampung Kedung Lumbu.

Kapung Baluwarti has several unique aspects due to its location. Firstly, most of its community is the royal family. In period of golden age of keratin, this people was the rich and honored society so that they were able to build various proper settlements which applied the Javanesse traditional architecture and a good urban pattern. Kampung Kedung Lumbu has a different situation to previous case study area although they are the nearby area of keraton. Most of community of kedung lumbu is an ordinary people and low-income society. This condition has affected to the appearance of their physical environment including housing and infra-structure within.

Up to know (2008), those two case study areas have not been involved intensively in the conservation of the Keraton Kasunanan Surakarta. This is ironical phenomenon because the born and development of this keraton can not be separated from those two case study areas, they should become the supporting parts of the grand design/grand planning of conservation of main area/heritage zone which are going to guarantee the sustainability of program.

Kawasan Baluwarti and Kedung lumbu have two important aspects for making a significant contribution to the conservation of the Keraton Kasunanan. Firstly, those two case study areas are located nearby the keratin. This fact is going to give various opportunities in creating a synergic relationship of case study areas and heritage zone. Secondly, the characteristic of their community is going to give a significant contribution in

enlarging and developing the conservation strategy so that it is going to be able to cover its potential nearby areas. Various home industries within community , such as souvenirs, handicrafts, cuisine, performances) have a opportunity to be created and improved for increasing their salary which lead to the empowerment of community for upgrading their physical environment especially slum spots.

Figure 1. The Map of Case Study Areas

3. DISCUSSION OF RESULTS

3.1 Economics activities of community at case study areas to fulfill their basic needs

3.1.1 Kampung Baluwarti :

Most of community of this area is the royal family who have worked for the palace since the period of their ancestor. Their salary depended on the financial capability of the management of Keaton. Community has responded such situation in two ways. Firstly, they accepted that because their sacrifice is the most important thing that they have to do for the king and kingdom. Secondly, they accepted such situation but the others family member (husband, wife, children, grand-children) have got various jobs inside and out side the area, and some others has sold and has rented their property to incoming people.

3.1.2 Kampung Kedhung Lumbu :

Most of community in this area have worked at small informal sector within their properties or other places, other home industries. Some permanent incoming residents can be found in this area because of marriage and job.

3.2 Contribution of community to the establishment and spread of slum spots within areas

3.2.1 Kampung Baluwarti :

Most of slum spots in Baluwarti are caused/stimulated by the way of life of community in responding the inability of keraton to give a sufficient salary to them. This group of people do not have capability to maintain and to restore their property or parts of property which have suffered various defects caused by aging and deterioration. Such conditions have become the embryo of slum spots in the period of time. Those slum spots within Baluwarti have not affected to the morphology of area because they were in the area/yard of houses (see Pict 2,3,4).

Figure 2

Figure 3

Figure 4

3.2.2 Kampung Kedung Lumbu :

Most of slum spots within this area were stimulated by the inability of community (former and later) to increase their income/salary that is important to make balance with the increasing expenditure. They do not have a sufficient fund for maintaining and improving their deteriorated settlements that lead to the establishment of slum spots. Those slum spots has influenced to the morphology of settlement, some additional rooms and spaces are built for kiosks in narrow space between houses or at side of pedestrian. These spots are going to stimulate the rise of slum (see Pict. 5, 6, 7).

Figure 5

Figure 6

Figure 7

3.3 Contribution of community to the conservation of the Keraon Kasunanan Surakarta

Conservation of the heritage zone of Keraton Kasunanan has been carried out gradually since 1980; it began with the restoration of the Sasono Sewoko in 1983. The conservation of the Keraton Kasunanan has not been carried out systematically; it has just been focused on the main building of the palace. Most of nearby areas of keraton suc as those two case study areas have not been included in the grand design of conservation.

Kampung Baluwarti and Kedung lumbu are two supporting area of keraton. They have suffered a serious deterioration in many spots, meanwhile, their community have faced a serious economics problem. Moreover, community has not had opportunity to participate in the conservation of their nearby heritage building and zone. Apparently, those problems of slum area and their community were not necessary to solve but they should be hidden from public.

4. APPROACH OF FORMULATING THE MOST SUITABLE METHOD FOR UPGRADING THE SLUM SPOTS WITHIN THE CASE STUDY AREAS

According to the research method, the approach of formulating the most suitable method for upgrading those slum spots within the case study areas has to be based on three main principles (see page 1). The comprehension of those principles is going to lead the formulation of method including the global frame of method and its work.

4.1 Global frame of method

The mechanism of upgrading of slum spots within two case study areas has to be integrated into the grand-planning/design of conservation of the keraton. This frame is going to give more alternatives of design and to enlarge the route of tourist's trip. Two important principles of frame are:

- All slum spots within the case study areas have to be main parts of whole network-planning of conservation. This network-planning lead to the upgrading of physical environment not only to slum spots but also parts/areas nearby area of heritage zone.
- The empowerment of community is gained by giving them various financial support to build and to improve small home-industries which produce various commodities which has relation to the keraton.

4.2 The work of global frame

The work of global frame gives an explanation and comprehension of the way how the method in upgrading the slum spots by applying some logical assumptions and real existing condition of the case study areas. Two important processes have to be explained in understanding the work of this global frame, those are :

- The way how to increase the income of community :
  In the beginning step, some member of family of community are trained to get/to build various skill in producing commodities which

has relation to the soul of heritage, such as souvenirs, handicraft, cuisine and various performance art. This mechanism is going to be able to increase the income/salary that lead to the improvement of economics capability. Some particular parts of Baluwarti has an opportunity to be a transit/rest points of tourist route. It means that time of tourism activity can be prolonged/extended. Hopefully, those tourists will spend more time and money to buy various products of the community. Meanwhile, the empowerment of community of Kedhung lumbu is focused on the production processes of commodity for supplying to the all tourist rest-points within the enlarging route.

- The way how to upgrade the slum spots :
  Two main aspects of slum area are important to discuss, namely aesthetical and structural aspects. Commonly, slum area is composed of buildings especially houses/settlements which is constructed spontaneously. Community have hampered various serious problems, especially economics during those process, therefore they have not paid enough attention to the aesthetical aspects of their settlements which has deteriorated by various effects of whether and an insufficient maintenance. Those visual and structural deterioration of settlements have stimulated the establishment of slum spots and area.

The method of upgrading has possibility to improve/to reconstruct the infra-structure physical environment simultaneously and to provide various additional space for economics activities simultaneously.

Those two principles give comprehension that the empowerment of community is going to effect the upgrading the slum area. This mechanism is able to be applied to the conservation of heritage such the Keraton Kasunanan. This method is able to enlarge the covered area of upgrading, not only the heritage zone but also its nearby supporting areas.

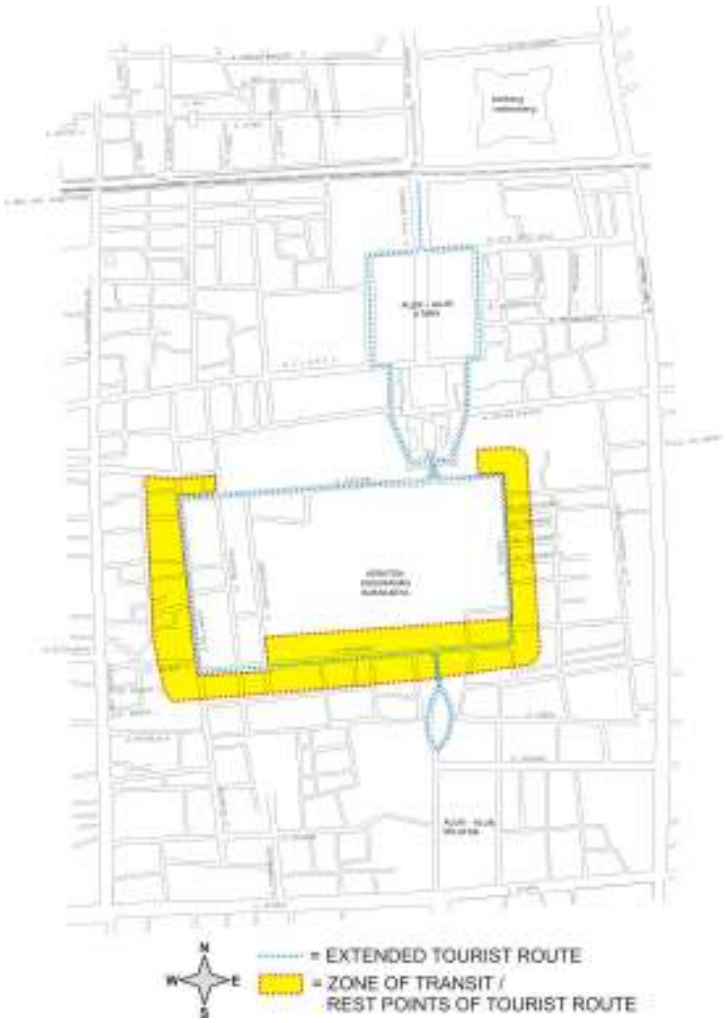

Figure 8 The Map of Recommendation for Extending Tourist route in Baluwarti

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusions :

- Kampung Baluwarti and Kedhung lumbu are important supporting areas of the Keraton Kasunanan Surakarta Hadiningrat, therefore they have had to be involved in since the beginning step of conservation of that heritage.

- A suitable method of upgrading slum spots/areas in a heritage zone is going to be gained by empowering its community. Economics activities of community has to be improved and stimulated by giving them various opportunities to increase their salary so that they are going to be able to maintain their new environment that has been upbraded.
- The strategy of upgrading for slum area within the heritage zone has to be integrated to the grand-planning/grand-design of conservation.

5.2 Recommendations :

- Community has to be involved intensively in the conservation of heritage, it means that they has got opportunities to improve their life and their future by stimulating the economics activities which may lead to the increase of capability in maintaining, improving and upgrading those slum spots of area
- The government and planners of conservation of heritage (building, area) has to let community participate actively in the mechanism of conservation. This is going to stimulate of creativity which may lead to the establishment of various alternative ways for increasing their income.

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1 - 17

Strategy to Revitalize Slum on Heritage Kampong Kauman Surakarta

Ir. Musyawaroh, MT.

ABSTRACT

Kauman is one of the ancient heritage kampong in Surakarta, which was in the past this was a place for *abdi dalem ulama* (religius server of Kraton Surakarta) and batik entrepreneur lived here. Kauman was established when The 3rd Pakubuwono built Agung Mosque in 1757. The *abdi dalem ulama* with their *santries* (moslem students of abdi dalem ulama) lived around the Mosque, and than called "*Kauman* " which means the kampong of kaum or santries. The wife and families of abdi dalem ulama make a batik handycraft to consume the kraton, which is right now their effort becomes batik home based enterprise. The golden era of batik in Kauman indicated with many luxury house that built in the early of 1800s up to in the middle of the 1900s. The buildings were built without followed with the adequate environment planning, so that, entire/all crowded area by building without open space at all.

Since 1970, batik industry was bankrupt, batik entrepreneurs canged their profession becomes civil employee or another, and only a few peoplel can exist with their batik home based enterprise (from 65 industry only remaining 4). Nowadays, their "luxury" houses are durty, slum and damage because of no money to maintain it after the first owner was past away. The environment around it becomes slums because the building of this sub-district built without guide lines from city planning.

Kauman needs master plan, to handling revitalize their sub-district becomes a cultural heritage and batik tourism, in order to increase income of the people who live there. The strategy are : reanimating the batik home base enterprise, awakening breath of Santri, and in the end making Kauman to a religius and batik tourism. These strategy followed by developing physical settlement fasility.

Keywords: Ancient Heritage Kampong, Batik Home Based Enterprise Bankrupt, Slum, Strategy, Revitalize

1. POTENCY OF KAUMAN

Sub-District Kauman reside in Surakarta Central Java, is one of the old kampong in downtown that closely related with Keraton. Its Kampong located surround the *Agung* (glorious) *Mosque*, having specific character with the ancient building distinguish the *Java Traditional Architecture* And *Indo-Eropa (Indische)*, and activity of society of have nuance to *Islami* (Moslem).

Figure 1. Location of Kauman on Surakarta

Sub-District Kauman broadly 20,10 hectare, divided into 7 RW and its regional 22 RT, boundered by : northside by Kampong Baru Sub-District, westside by Sub-District Kemlayan, side South by Sub-District Gajahan and eastside by Sub-District of Kedung Lumbu.

Kauman is very potential Old Kampong to preserve and developed become the religion and batik tourism with the reason as follows (Musyawaroh, 2001 : 22) :

1) Historic ancient kampong with a variety of artefak building, such as Agung Mosque, Impinge The, House of *Abdi Dalem Ulama Kraton* (Religius Serve of Kraton) and House of Batik Entrepreneur, mostly still original and ready to awaken again.
2) The Society still hold the firmness of Islam, "kampong religius serve of kraton and batik tourism" becomes specific potency of Kauman which different to other places
3) By the realtively close location to Keraton Surakarta, this will be potency to develop this kampong which strengthen the existence of Kraton and the kampong around.

4) Located In Cultural Corridor of Surakarta (Kraton-Mangkunegaran-Gedhe Market), representing region with the priority of conservation handling (Soewito, 1993 : 8).
5) Located in commercial region and white colars, so that have the easier economic possibility and fast growth
6) Local Society Partisipatory enthusiasm in powered its region, this matter proved with formed of Kampong Wisata Batik Kauman Society at 7 April 2006 ago.

Kauman was developed when Paku Buwono III built the Agung Mosque in 1757, The King lift Tafsir Anom (one of abdi dalem ulama) as Agung Mosque Chieftain. In executing his everyday duty he assisted by other abdi dalem ulama (for example Ketib and Merbot). All of abdi dalem ulama with *Santries* (Moslem students of abdi dalem ulama) live around Agung Mosque which later then expand and named "Kauman" meaning the kampong of santries.

Sub-District Kauman was began from *Kawedanan Yogiswara/ kapengulon*. Agung Mosque and its surroundings is ownership land of Keraton and called Earth of *Pamijen Keraton* or *Domein Keraton Surakarta*. Kauman called *Bumi Mutihan* or *Bumi Pamethakan* that means region which shall only be dwelt by people (*kawulo dalem*) what believe in Islam. However according to information from Shares *Pasiten* (1998) self governing land;ground / ex- this self governing according to Kepmendagri 26 May 1988 No : 593.82/1957/SJ as according to Diktum to 4 letter of A UUPA begin 24 September 1960 have been vanished its rights and transfer to the state, the land become the goverment land and can be requested by up to standard any person who to become property.

Name of kampong in Kauman was given according to to its dweller activity, *kampong Pangulon* means residence of Chieftain keraton, *kampong Sememen* means a ketib Sememi, *kampong Mo*dinan represent the residence of Modin. Besides there are kampong of *teteko*/ new comer (kampong Baladan, Brodiran, Gerjen and others). While name of street taken away from symbol of highness of karaton Surakarta assumed have the strength magical, among others the name of street of Wijayakusuma and Kalimosodo have the historical value which sakral that way according to Biwadanata PB X which is laid by Wiwik Setyaningsih (2000 : 46).

In the begining all abdi dalem ulama only worked just as abdi dalem. His wife and families produced a batik handycraft to consume the kraton. Later on, their effort develop and increase to become batik home based enterprise, succeed to boost up the economic level of society. This effort causes society of Kauman can build the luxury house in the early year 1800 up to in the middle of the 1900. Is very regrettably, this house were woke up without followed with the good environment planning, so that, the area was crowded by building without open space at all.

However, in the beginning of 1939 up to the year of 1970s batik industry was bankruptcy, affecting a gradually declined of batik home based enterprise in Kauman. A lot of batik entrepreneur change their profession become the other civil officer, private sector or another. Only remaining some of small batik entrepreneur which still continue its effort, room (*lojen* / shop, *gandok* / warehouse and factory) place of batik product altered its function adapted for a dweller requirement in this time. Ex-place of effort batik become sleazy, dirty and damage.

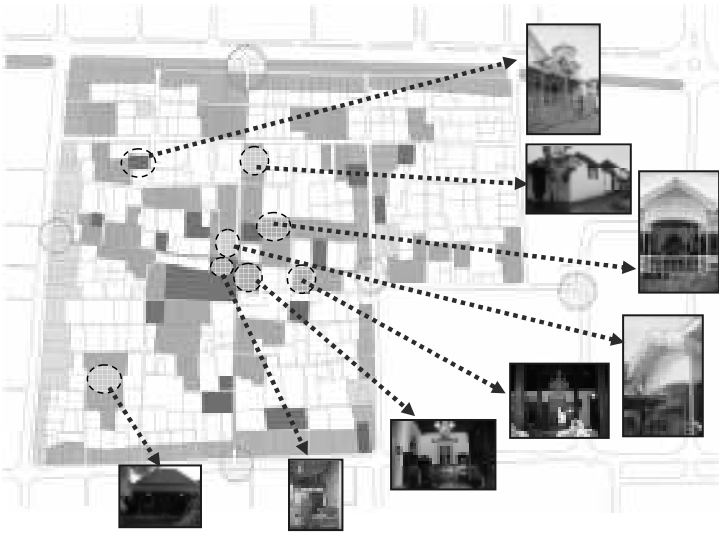

Figure 2. Location of Ancient Building on Kauman

2. EXISTING CONDITION OF KAUMAN IN THIS TIME

Population of Sub-District Kauman is 3.406 persons, consisting of 766 households, .Number of houses is 458 houses, representing crowded setlement. At present most resident have living here as merchant that is 424 persons, construction labour 216 persons, industrial labour 154 persons, entrepreneur 149 persons, transportation 65, retired people 53 people, Civil Employee and Army 12 persons.

There are differences of socio economic life style between the inner kampung Kauman and in outer ring kampong . PEople who live in inner kampong area are generally aborigin Kauman, with the living most as merchant or continue the effort its old fellow batik. Whereas, people in the outer ring kampong are mostly clan Tionghoa) exploiting their house to open the shop or white colars. Society that live in Yos Sudarso street (step aside of West Kauman) opening shop aksesoris, jackstraws, white colars and

others; in Dr. Rajiman street (step aside of South Kauman) opening gold shop; in Slamet Riyadi street open the dealer, flower kiosk, agent and white colars. While in Hasyim Asy'ari street (step aside of East Kauman) mostly property of aborigines open the bookstore & moslem supply.

Nowadays, numbers of the active batik entrepreneur in the area are decreased from around 65 big/middle effort to remaining 4 factories. Surprisingly, since 2006, with fasilitation the small multivarious batik home base enterprise have been arising to 70 factories, which most of them do their batik process outside Kauman.

Since batik home based enterprises were bankruptcy the environment of Kauman step by step begin slum :

1) Ex-house of the religius serve and batik entrepreneur are sleazy and damage. Partly have terracing, rented and become dirty.

Figure 3. Ex-houses of religius serve of Keraton (*abdi dalem ulama kraton*) are sleazy and damage

Figure 4. Ex-houses of batik entrepreneur are sleazy and damage

2) There are crowded area and full of ancient building without open space at all.

Figure 5. Crowded and full ancient building

3) There are no drainage networking system. When torrential rains falling down cause the floods 10-20 cm and emerge the ponds irrigate.

Figure 6. Street and alley without drainage network

4) Most of waste channel irrigate are stuffed up, leaky, porosity and damage everywhere
5) Street / alley in this area are narrow 2-4 metre hedged by high ancient massif wall, causing the circulation of motor vehicle is less fluent.

3. STRATEGY FOR REVITALISATION OF KAUMAN

Sub-District Kauman needs of revitalisation due to some reasons:

1) Concerving the specific culture and ancient building in order do not quickly lose, considering that area is very potential commerce that quickly change altered to become the shop or modern commerce.
2) Taking care of their ancient building by the community.
3) Increasing the environmental quality and number of tourist interested in this area
4) Optimalization of this area to be residencial area and business activity.

Writer and Team Community's Advisor (to Revitalize Kauman Area) Architecture Departement of Engineering Faculty UNS, since March 2006 have been conducting fasilitation with the Community Organization of Kampong Wisata Batik Kauman, the steps which planned to revitalize this area (Musyawaroh, 2009 : 3) are :

1) Short-term goals : Reemerging the effort batik in that area.
   With its life return the batik home base enterprise, expected the growing of effort climate in the area, improving society prosperity, so that can take care their ancient building and environmental sustainability
2) Middle term goals : Reemerging Kauman as a *kampong santri.*
   Revitalized and good maintain the religion ancient building in this area improving religious activity better.
3) Long-term goals : Developing Kauman as a Kampong Wisata.
   With the cultural specification of santri, ancient building and its batik home base enterprise, Kauman expected to become the special location wisata which different to other places

Steps mentioned above followed with the handling of environmental physical settlement planning as follows :

1) Short-Range :
   - Environmental Settlement Planning in phases
   - Repair of rainwater and waste irrigate network
   - Making of heritage walk " marga lestari "
2) Middle-range :
   - Totally environmental settlement planning
   - Traffic management
   - Handling street and parking area
3) Long-Range :
   - Making environmental open space and another facility support.
   - Sustainability maintain ancient house/building and environment.

There are some Activities which have been executed by writer and team reach the phase of early / short-range, that is for example

1) Non Physical
   - Improving people awareness about the potencies of their area, so that society can exploit the potency optimally with interest and do not damage the ancient house / building owned.
   - Promotion to global society through a newspaper and electronics mass (TV and radio), and participation to seminar/exibition/diskussion that related to area conservation.
2) Physical :
   Making Detail Engineering Design of settlement utility and heritage walk (" Marga Lestari ") executed in handling of physical phase I Kauman with the the following reason :

- Kauman just only have domestic waste networking system in middle shares, which is made by Dutch Government, not yet been repaired again during more than 30 year, with its condition a lot its have stuffed up, break and porosity so that contaminate the citizen well.
- There are no drainage networking system in middle share of Kauman, rainwater emit a stream in street uncontrolled, causing floods and pond in some place till run dry by itself.
- There are some active batic entrepreneur which are still active producing batik, but don't have available industrial disposal network. Waste poured into interceptor PDAM or to common moat generating contamination of the environment and deliver lampooning or sanction from government.. This needs providsion of special industrial disposal network/ separated, so that society can be free to life return its effort. The entrepreneur try to lessen of contamination by using natural batik colourant materials, that made from mango leaf, pace leaf etcetera.
- In wayside of Wijaya Kusuma street, and Cakra street and trisula VII street, there are ancient house of batik entrepreneur and impinge. Partly house still active producing batik and have the lojen for showroom of batik.
- Heritage Walk made in such a manner balmy so that, calm and nice for the place to walk, look around / perceiving ancient building in wayside of street.

Figure 7 Gate and shelter on DED Kauman

- Providing a gate in Wijaya Kusuma street wayside of Slamet Riyadi street, the main way to access Kauman from regional road. It is need landmark to make the people that passing interested to visit the Kauman.
- Providing a gate in Masjid Besar street to access Kauman from Kraton and Agung Mosque and Alun-alun Utara Kraton (North Plaza of Kraton).
- Planting trees for reboisation crept on pergola alongside Wijaya Kusuma street, Trisula street & Cakra street.

Pickings which have been executed by society Kauman shall be as follows :

1) Result of Non-Physical :
   a) Developing the KUB saving and loan.
   b) Publishing the monthly bulletin of batik, with the individual fund / society.
   c) Training.

d) Reporting the community activities in the Mass Media local/national/international.
e) Networking activities to local/national/international. events

2) Result of Physical :

a) Building the Museum Batik, with the individual fund / self-supporting.
b) Building the new showroom (at last 8, now become 70).

Figure 8. The new batik showroom in Kauman

c) Increasing amount of life return batik home base enterprise (at last 4, rounding into 15).
d) Publishing book entitke Kauman Religi, Tradition and Artistic", through cooperation with community's fasilitator from Architecture UNS, " with the fund of block grant
e) Developing garden on street and street sign, with the relief fund from Town Government.
f) Making hang of garden above street, with the self-supporting fund.

Figure 9. String hang of garden above street

g) Making heritage information in intersection Wijaya Kusuma street.

Figure 10. Heritage information on the wall wayside

Growth in physical so far is not signifikan yet, but optimism, Kauman can improve with sustainability to be a good tourism area, considering motivation of society enableness emerge from the rising generation circle.

4. CONCLUSION

Kauman is very potential Ancient Kampong to preserve and developed, the reason are :

- Historic ancient kampong with artefak building, mostly still original and ready to awaken again.
- Society still hold the firmness of Islam,
- Closely related with Keraton Surakarta.
- Located In Cultural Corridor of Surakarta.
- Located in commercial region and white colars.
- Local Society Partisipatory enthusiasm in powered its region.

The slum on Kauman sub-district in this time are :

- Some of ancient building are sleazy and damage.
- There are crowded area without open space at all.
- There are no drainage networking system.
- Most of waste channel irrigate are stuffed up and damage.
- Street / alley in this area are narrow 2-4 metre.

Strategy which planned to awaken-again this area are :

1) Short-term goals : Reanimating the effort batik in that area.
2) Middle term goals : Awaken again the breath Kauman as kampong santri.
3) Long-term goals : Lifting Kauman as Kampong Wisata.

The handling of environmental physical settlement planning followed above are :

1) Short-Range :
   - Environmental Settlement Planning in phases
   - Repair of rainwater and waste irrigate network
   - Making of heritage walk " marga lestari ”
2) Middle-range :
   - Totally environmental settlement planning
   - Traffic management
   - Handling street and parking area
3) Long-Range :
   - Making environmental open space and another facility support.
   - Sustainability maintaining ancient house/building and environment.

Activity which have been executed by writer and team are :

1) Non Physical :
   - Improving community awareness about potency of the area.
   - Promoting a global society and participation in the seminar/ exhibition /discussion.
2) Physical :
   Making DED of settlement utility and heritage walk ("Marga Lestari")

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1 - 18

The Positive Impact of Walkup Flat Building to Improve the Quality of Slum Area

Gagoek Hardiman

ABSTRACT

Upon the developed country with high people population growth and low economic level, at several big cities such as Semarang and Makassar, slum areas could be discovered. Several inconvenient problems can cause fire and flood hazard. Those problems emerge because of the lack of environmental infrastructure and the social - economic condition.

The theory of infrastructure explains that there is an interactive relationship between physical, social and economical development. Therefore, the developing of social and economical condition can be done by physical development such as environmental infrastructure.

Due to the direct field observation in several low-prize flat building for low-income societies, which have been built closed to slum area, such as in Marisso Makassar, and Sawah Besar Semarang. One can get awareness to investigate, whether the building of walkup flat closed to slum area, can give the significant positive impact and stimulate the improvement and the enhancement of the quality of slum area or not, and how far those positive impacts will be.

Even though staying in the walkup flat is the new experience for the Indonesian people, more and more people can complete the adaptation. Compared to staying in the slum area, there are many advantages, such as the certainty of the healthiness, fire hazard avoiding, and flood hazard avoiding, etc. The advantage can act as positive impact for the slum area, which is closed, or surrounding the flat. In the future, it is expected that there will be a mutual interaction between walkup flat and slum area.

Keywords: Environmental infrastructure, slum area, and walkup flat

1. INTRODUCTION

The condition of the slum housing in several big cities in Indonesia is a concerning matters to be solved. The increase of the slum house quality is an effort to increase the condition of the ordered, beautiful, and well-structured city plan. The general matter upon the slum housing is upon the existence of the dense building, flammable building material, etc. Moreover, upon the area with the moist tropical climate, the rain frequency is considered high, so that upon the raining time, there is always spot of flooded water caused by the uncertain water flow. The very dense houses and the less of opened space cause the poor air circulation, causing the incomplete sunshine covering that causes the increase of the humidity. The over dense building and the houses that are built chained each other cause the flammable area, moreover the non-existence of the proper environment utility such as drainage, accessibility, clean water, trash corner, etc.

Certainly, there are several methods to increase the quality of the slum settlement; one of them is the construction of walkup flat. Upon the existence of the walkup flat, the development or the tendency of the more densely the slum could be solved by relocating some of the slum dwellers to the walkup flat.

The existence of the walkup flat could provide the positive effect to the around slum house, especially upon the increase of infrastructure quality, such as the fire detection system either active or passive, the clean water providing, the drainage system, the trash recycle system, the environment greening, etc.

The problem upon every area is different; it all depends on the character, situation, and condition. Based upon the direct observation completed in Mariso Makassar and Sawah Besar Semarang, it could be concluded that the problem of the slum area is considered different but there is similarity, such as the density that makes degradation of the land sustaining force and the environment quality. Upon those two territories, there is establishment of the plain walkup flat, so that it is considered important to complete research upon the correlation between the walkup flat and the improvement of the environment quality of the around slum area. To secure the accurate data, certainly, in order to have an accurate analysis needs several years period to complete after the establishing of the rented walkup flat/ *Rusunawa*. However, several prior steps are based descriptively upon the recent phenomena that are observed to recognize the role of *Rusunawa* as the stimulant or motivator for the increasing of the environment quality improvement of the concerning slum settlement.

2. THE SLUM HOUSING PROBLEM

The slum housing could be indicated from several aspects, such as: the tight limitation of the society's ability upon the fulfillment of the basic necessity, including housing, which forces them to dwell the improper place in that they are the squatters.

Considering the philosophy of the housing and settlement as the basic necessity of human being after clothing and food, in which it has a strategic role as the educational center to form the character, personality, culture, and young generation future preparation, the improvement of the slum settlement is considered very valuable. According to UN Habitat (2003)." The urban population in less developed regions increase by 36 per cent in the last decade".

The major problem that has been the obstacle of the slum improvement is the relatively dense population and the limited economical capability since they often earn income from the informal sector. This problem affects the quality of life. Kowaltowski (2006):' Quality of life was related to feelings of security, physical safety, environment comfort etc.

In order to improve the condition of the slum, it needs to have the improvement of the life standard upon the rise of the income so that it cold improve the self-ability of the society. Thus, one of the methods is by improving the society's income so that they can have the access to the source such as bank. By the cooperation with the bank upon the credit installment, they can manage the money upon the observation and cooperation with the related private or government, since it is so difficult that the problem shall only be handled 100% by the government.

The construction problem upon the slum is the uncontrolled house building expansion, which is without IMB (Building Construction License), breaking the principle of standard building measurement, building coverage, opened space as the public facility, etc. These are dangerous, for the example: upon the fire accident, the fire spreading would be unstoppable, and upon the dirty water, the water will cause flooding spot every time it is raining.

The building condition should be restructured; besides, the infrastructure condition upon the slum is usually problematic and required restructuring. The infrastructure condition is getting worse for the slum that suffers flood and seawater flood in that they are problems to Semarang's downside city, whereas, upon the upside, there are landslides upon certain slum spots, such as Lempongsari area.

The variety of infrastructure that needs to be restructure is various upon every slum. Generally, the infrastructure component that needs to have

restructuring is: the street arrangement and the standard building measurement, waste tunnel, trash spot locating, clean water providing, etc.
The evaluation criteria used upon the slum standard are:

- Location: the frequency of the flood incident, the status of building ownership, etc.
- Population: the population density, the population growth, etc.
- Social and economy: the poverty level, the safety standard, under-five infant nutrition status, etc.
- Basic necessity: drainage, clean water, trash, etc.
- Building condition: the number of slums, standard of health & building comfort.
- Komarudin (1997): definite that slum area is very dense area more than 500 people /ha with worst infrastructure.

2.1 Slum in Mariso Makassar.

The slum condition in Mariso, Lette Sub-District is considered poor. The main problem is upon the improper building condition, the building distance standard and the less opened space, and he less of environmental facility.

According to the picture

Figure 1
The slum of Mariso, The jammed water flow, Flood hazard.
(source: Gagoek.H)

Figure 2
The slum of Mariso. Very dense building with the less environmental utility with the muddy street and puddle of water upon the raining time.
(source: Gagoek.H)

2.2 Slum in Sawah Besar

The slum condition in around Rusunawa in Sub-District of Sawah Besar could be mentioned as poor. It is also happened upon the slum condition in Sub-District of Tambak Redjo. The major problem in there is flood and the seawater flood. According to the interview with the people of Sawah Besar and Tamakrejo, the annual flood is so disturbing that causes significant material loss. The slum condition is upon the picture:

Figure 3
The slum upon the southward of *Rusunawa* Kaligawe.
(source: Gagoek.H)

Figure 4
The slum upon the southward of *Rusunawa* Kaligawe.
(source: Gagoek.H).

3. *RUSUNAWA* AS THE ALTERNATIVE OF THE QUALITY IMPROVEMENT OF THE SLUM

RUSUNAWA is expected to have functioned as the prior stimulant to solve the growth of urban slum area upon the context of urban renewal. People who receives privilege to stay in *Rusunawa* is the low-income one, considering the concept of *Rusunawa* is rented flat. Therefore, it is expected that upon their staying in there, the income could get increased, so that upon the period of 4 years, they could buy the house upon the subsidized governmental credit installment facility themselves. Since the concept of *RUSUNAWA* (Rented walkup flat) so that it is different from *RUSUNAMI* (Owned walkup flat), thus the renter of *Rusunawa* is temporal. With the system, the function of *Rusunawa* is expected to be able to solve the problem of the low-income society out of the slum. So wrote Couch (1990);" There was a low level of knowledge about the nature of the housing problem and about appropriateness of solution. It was causes of cholera etc and related diseases began to be understood and the importance of clean water supply, proper drainage and building ventilation appreciated."

3.1 *Rusunawa* in Marisso Makassar

Near to the slum of Mariso, there has bee an establishment of *RUSUNAWA,* this Building is a row of flats located in the waterfront region of Makassar, built in the year 2006-2007 as part of the governmental subsidized housing project focused on the providing of new houses for the low-income society. Upon the first phase, there were 3 blocks with 228 rooms established. Absolutely, the amount is still far from the necessity. Nevertheless, considering that the *Rusunawa* is the first one in Makassar, the existence of *Rusunawa* is very important, especially upon the introduction to the low-income society in order to familiarize them with the living condition upon the walkup flat, since besides having many disadvantages, it is also having advantage compared to living upon the slum, which is not even completing the health requirement. For the next phase, there would be other 228 rooms by Local Budget of 44 Billion IDR. Recently, the established *Rusunawa* has been inhabited.

Figure 5
Rusunawa of Mariso durung under construction. Viewed from Tanjung bunga- GTC.
(source: Gagoek.H)

Figure 6
Rusunawa of Mariso durung under construction. Viewed from the slum of Mariso
(source: Gagoek.H)

2. *Rusunawa* in Sawah Besar Semarang

In 2006, there was the establishment of 3 twin blocks consisted of 228 flats of 21 type. *Rusunawa* in Sub-District of Sawah Besar called as “Kaligawe Rusunawa” is also surrounded by slum area such as the slum of Kaligawe, Sawah Besar, and Tambakrejo. Next in 2008, there was the establishment of 4 twin blocks upon the capacity of 384 units of 24 type. So that recently, there have been 7 twin blocks that are expected to be used by 600 families, however, this *Rusunawa* is still empty. It is not caused by less of the interest but it has not been finished completely.

In the flood season, the yard of *Rusunawa* is used as the evacuation spot for the people of the slum.

Figure 7
The first phase establishment of RUSUNAWA of Kaligawe.
(source: Gagoek H)

Figure 8
RUSUNAWA of Kaligawe upon the slum as the background.
(source: Gagoek H)

4. THE POSITIVE IMPACT OF *RUSUNAWA* TOWARD THE ENVIRONMENT INFRASTRUCTURE

4.1 *Rusunawa* in Mariso as the stimulant/ motivator toward the improvement of environment infrastructure in the surrounded slums

By considering one mission of *RUSUNAWA* to reduce the city slum, the establishment of *RUSUNAWA* of Mariso is considered as the correct method, moreover Mariso territory lay upon the shore, in which it is not anymore by the existence of main road established by the system of sea reclamation of 1 kilometer from the territory of Tanjung Bunga to the elite territory of Gowa Trade Center (GTC). The establishment of spectacular city would be more appropriate by the method of reducing the city slum. The fisherman's family in the slum is expected to move to *Rusunawa* to decrease the population growth in the slum, which will increase the environmental facility.

By the existence of *RUSUNAWA* in Mariso, the environmental facility in Mariso, such as: the necessity of clean water, accessibility, management of trash, electricity, and water flow will be put in priority.

It is expected that by the future time, the people dwelled in *Rusunawa* will have the consideration of the importance of the healthy environment, so that after they leave the place the will not live in the slum anymore.

4.2 *Rusunawa* in Sawah Besar as the stimulant / motivator toward the improvement of environment infrastructure in the surrounded slums

Kaligawe *Rusunawa*, like *Rusunawa* of Mariso that lies near to main road from the sea reclamation, lies near to the free way of Semarang city, so that both of them participate to increase the city view, since they can be seen from the main street.

Kaligawe *Rusunawa* lies near to the area that is commonly flooded, so that the existence is considered advantageous for the surrounding slum.

The development of Kaligawe *Rusunawa* could be made as the example for the surrounded upon the importance of the effort to solve flood, and the providing of clean water by *Rusunawa* could be used as the example to follow by the surrounded.

The system of the story building could also wake the society upon the surroun ded environment on the importance of stage house in order to avoid the damage caused by the high rise of the flood. The trash management in *Rusunawa* could also be followed by the surrounded if it is applied correctly.

The positive effect of *Rusunawa* toward the improvement of environment infrastructure will be more accurate and certain if it is used already, thus, the research upon *Rusunawa* after it is dwelled will be very advantageous to acknowledge the positive effect of *Rusunawa* toward the quality improvement of the surrounded slum.

5. CONCLUSION

The problem of slum in several big cities in Indonesia has been dilemma. If it is let free, it will be difficult to achieve ideal condition. The dilemma is getting increase since for the migrant the interest of cheap settlement for them when they go to the city attracts them, thus, the growth is getting more crowded. To renovate it to fulfill the ideal condition, it needs to have big fund, whereas the capability of the society is still poor, so that it is still dependent to the government's subsidy.

The effort to reduce the slum level has been completed through several projects such as KIP, PJMP3KT, PDM-DKE, etc. One of the efforts is to establish plain rented walkup flat. Although, many parties are doubtful upon the appropriateness system of *Rusunawa*, upon the reason that people still do not use to live upon the story building. However, if it is observed from the correct proficiency study and *Amdal* study, the *Rusunawa* establishment as the effort of urban renewal is very acceptable, and the low-income people needs to adapt to the transition.

It is expected from the establishment of the plain rented walkup flat that it is as the stimulant/ motivator toward the improvement of environment infrastructure in the surrounded slums, at least upon the hazard of fire, necessity of opened space, clean water, accessibility, management of trash, electricity, and water flow.

Especially for Kaligawe *Rusunawa,* the positive effect is that the society realized that the place could be used as the evacuation spot during the flood, so that they can realize the importance of the story building.

The fact that houses upon the slum established near each other cause the slum flammable, and make difficult for the rescue from the fire department, so that by the existence of *Rusunawa,* the spot of slum could be restructured, such as the providing of the opened space and the road widening.

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Sustainable Lifespan Based Low Cost Apartment a Better Solution for Slum Upgrading in Urban Area

Rika Kisnarini

ABSTRACT

Housing development for the lower income community in urban areas in many developing countries is still highly required currently, since the poor life and their housing situation remains far from favourable (UNHABITAT 2003). Urbanization often results in increasing the urban load problems, either the rapid growth of urban poor population, or the worse condition of slum and squatter settlements.

This paper aims to propose alternative solution for slum upgrading. Alleviating the urban poverty by fighting and kicking them seemed seldom be a good solution. Join them at a more formal way, often with the support of international agencies, sites and services projects were introduced to try and upgrade the 'slum and squatter settlement' areas and provide higher levels of services, is often more solving. 'Slum and Squatter' areas should be formally upgraded, densities should be lowered, and schools & other basic services and facilities should be completed. In most advanced cases, entire areas were rebuilt in more standardized units (Aldrich/Sandhu 1995).

Yet, the development should also consider the importance of sustainability and lifespan based performance, as at the same time there is an increasing pressure in many regions in the world to provide a sustainable environment for present and future generations (Brundtland, UN/WCED 1987, UN/MDG 2001,2008). (Friedman 2007) Sustainability & Lifespan based performance of buildings requires incorporation of essential aspects generated from (1) considerations of technical, social, environmental and economic nature, in compliance with building codes and regulations as well as (2) by taking into account end-of-life environmental effects of expected lifespan of building.

Result of this paper will be descriptions of important steps or requirements that should be met by government which include: the problems, potentials,

policies and issues within the slum upgrading, the global context in housing the urban poverty, how the development perspective should be, and the sustainable development problems.

Keywords: Low cost apartments, Slum-Upgrading, Sustainable & lifespan, Urban areas.

1. PROBLEMS AND POTENTIALS ON SLUM UPGRADING

1.1 Problem on Insufficiency of Infrastructure and Facilities

The rapid growth of cities, especially in developing countries, leads to social problems, such as increased urban poverty as well as to serious burdens for human health and the environment. In industrialized countries a massive proportion of the use of natural resources and harmful emissions into the air, water and soil is concentrated in urban settlements. With the growth of population, more resource and energy is consumed and as a result environmental pollution increases. The energy crisis and global changes in environment caused sustainability to become the main concern of many groups.

The most enduring expressions of urban poverty in developing countries are the proliferation of slums and informal settlements. These settlements have most deplorable living and environment conditions within the city and are characterized by inadequate water supply, squalid conditions of environmental sanitation, overcrowded and dilapidated habitation, hazardous location, insecure tenure and vulnerability to serious health risks among many others. (UNHABITAT 2003) Billions of people live in slums and shanty towns, in cities and countries around the world, many in tropical areas, doomed by ongoing poverty to grossly inadequate shelter. The shortage of affordable housing directly affects the quality of life for the millions who spent out their housing payments every month, sacrifice the purchase of other essentials, commute long distances to work, and suffer overcrowded or unsafe conditions. Without funding programs to help subsidize their mortgage, many residents would not qualify for affordable housing loans. In most areas, the problem of affordable housing is acute and hotly contested issue.

1.2 Yet, the poor can potentially be empowered for their own housing

The urban slums, on one hand are urban problems, yet on the other hand, in economic terms, actually have become an important component of urban planning in the third world countries. It can contribute a significant quantity of labor force to urban labor market and generate adequate income not only to sustain the urban economy, but also to attract more migrants towards the

economic enclaves. The stagnation of agriculture and industry sectors can be treated through the growth trends of economy by pushing the rural underemployed and unemployed laborers to the urban areas in order to achieve better income and lifestyle. The urban centers particularly the metropolitan centers may become enclaves of economic power. It is not only the rural–urban income differentials, as perceived by physical and demographic planners that activate the 'push' and 'pull' factors, but other factors such as access to basic facilities and amenities, access to institutional and political power, also trigger off the rural–urban as well as the urban–urban migration (Srindharan in Aldrich & Sandhu 1995). This potential can be used also in empowering them for building their own houses such as through self-help housing system.

2. POLICIES AND ISSUES IN SLUM UPGRADING

The policies to reduce housing poverty (Aldrich and Sandhu 1995) include:

1. Policies which raise the income generating capacity of the poor will contribute towards reducing housing poverty. The policy may include: programs to enhance informal and formal sector markets, state, and other provisions to add the skills and human capital of the poor in labor market, and steps to improve infrastructure in urban areas where the poor live (World Bank 1990).
2. Policies for cross subsidization in sites-and-services programs (Pugh 1990), and in lowering relative prices in low income housing markets by increasing housing supplies.
3. Policies in switching the emphasis for low income housing from the microeconomic to the macroeconomic considerations. Housing sector development can be used both for lead growth sector and for economic correction for some unemployment.
4. Policies in provision the infrastructure services should be reformed. Good policy contexts would link government agencies, NGO's, popular mobilization of the people, and self-help initiatives. Arrangements for financial support, information, and training should have to be highly adaptive and flexible.
5. Policies that set low income household as the priority. Deregulation may assume importance because inappropriate regulations in building and town planning codes may restrict housing supplies or exclude some productive at home income generating activities.
6. Policies for enabling tenure and access to housing for low income households. This will involve recognition of occupancy rights in informal settlements, including the range of recognitions from de facto acceptance to the regularization of tenure. This must be justified on both, households and owners should feel secure in making housing investment.

As the problems are many in complicated, the planning issues involved in slum development are many. The solution required should be an “integrated plan” which encompass social, physical or environment, and economic aspects of improving the quality of life of slum dwellers. The issues indentified can be grouped into preventive and curative aspects. ***The preventive aspects*** include population policy vis-à-vis industrial policy and the overall policy towards housing and poverty alleviation. ***The curative aspects*** include environmental education, development of formal and informal financial systems to finance the economic activities & housing, community participation and provision of infrastructural facilities.

3. GLOBAL CONTEXT IN HOUSING URBAN POVERTY

Slums and squatter settlements are often difficult to separate. However, slums generally refer to housing, regardless of tenure, which has fallen into such disrepair that it constitutes a general condition for a neighborhood or community. The presence of slums and squatter settlements in a society is a clear indication of the failure of a society and government to provide adequate habitat for human development. The term ‘slum’ is used to indicate housing which falls below a certain level which is necessary to contribute to human development. The term ‘squatter settlements’ is used to indicate housing that is either the result of illegal occupation or has been developed in unauthorized fashion (The World Bank 1992). The amount of squatter housing is one indication of the extent of housing poverty in a society.

A squatter area could also be a slum. Generally such areas are in the older central parts of cities (Nagpaul 1988). Squatter settlements vary in their conditions and characteristics of their occupants. They may consists of low income and low status persons who have been forced to live outside the bounds of tenured land holding (Nagpaul 1988) in order to survive in urban setting. In some societies, the squatter populations may consist of large, integrated urban areas with housing, factories, shops, and services with a million or more people (Yap 1990). Squatters may occupy parks, river banks, railroad right-of-ways, and other small pieces of urban land (Aldrich and Sandhu1985). The main characteristic of squatter is the lack of ownership of the land on which the squatters live. The uncertainty of their tenure situation creates problems for capital improvement in physical structures and social commitment to the larger neighborhood and community (Angel 1983).

3.1 Factors to consider

The important solution is the issue of level of economic development. In the best circumstances nothing can be done if the economy is not working, or the nature of the tie to the global economy means that stability is impossible.

Without a stable and growing economy, resources for housing and related services remain scarce. Almost all developing countries are suffered from this problem to one extent or another. However the relationship between the level of economic development is not directly and unambiguous (UNDP 1991). There are many factors which can intervene.

Other key factor of this is the role of the national and local political elites (Field and Higley 1980). Another issue is bureaucratic problems. The others are 'new skills' that are required to promote and to coordinate community development, particularly development from below:

- Skills of a diplomat
- Skills of economic analysis
- Knowledge of infrastructure

International experts are beginning to recognize the providing good, secure housing in third world countries is not just a matter of bringing in new methods and techniques, but a recognition of the fact that housing programs must take into consideration local political, economic, and social variation in order to be effective.

3.2 The Practices

The policy generally involved destroying large amounts of housing near places of employment for unskilled and semiskilled population and relocating these residents to a distant fringe of the city. The squatters were not supposed to be where they were, so one of the universal policies usually was squatter clearance. This often meant relocation to another urban squatter settlement. This approach is usually in-successful and resulting in the relocation of large numbers of urban residents to urban fringe areas to other regions of the country.

The relocation sites were almost always inadequate in terms of the infrastructure and services. Mostly they were very distant from the resident working places. Families often splits up from each other members who live in other slum or squatter settlements closed to their work, and commuting on weekends. These policies generally created a great deal social problems which usually leading to injury, death, and often the development of major political unrest.

There are two solving approaches which can be offered:

- Philosophy of: **'If you cannot fight them, then join them'**, on which at a more formal level, often with the support of international agencies, sites and services projects were introduced to try and upgrade the 'slum and squatter settlement' areas and provide higher levels of services. The 'Slum and Squatter' areas should be formally upgraded, the densities lowered, and schools and other basic services and facilities

should be completed. In the most advanced cases, entire areas were rebuilt into high rise housing or more standardized units (Aldrich and Sandhu 1995).

- The most famous policy: **'Autonomous Housing'**, on which the squatter groups are let to construct their own houses with their own resources (Turner 1976). This can be considered as effective policy. In this case, the residents should be provided with some basic resources to enable them to improve and build their own housing. The government should facilitate those squatters and support their accessibilities.

4. HOW THE PERSPECTIVE OF DEVELOPMENT SHOULD BE

The built environment has a large impact on environmental sustainability. The present wasteful performance of building construction in terms of exploitation of the World's natural resources and release of pollutants in the environment is widely acknowledged.

4.1 Sustainable housing

There are numerous theories, guidelines and tools have been implemented in developed countries, one of them is environmental themes (Blaauw, 1997) that derived from a workbook for sustainable building and housing:

- Energy
- Use of materials
- Water
- Disposal
- Site
- Green
- Traffic
- Outdoor environment
- Indoor environment

However, (Brundtland, 1987) sustainability should involve social equity, environmental quality and economic prosperity (people, planet and profit). (Dwinita Larasati, 2006) Correspond to the seven aspects of sustainability, based on Indonesian government recommendations as a developing country, healthy housing aspects can be described as follows:

- Energy
  Housing unit should be supplied with access to electricity and water, along with sewers and all supporting facilities. It is recommended to use natural light as much as possible, so the ventilation.
- Materials

Housing materials are limited to inexpensive choices therefore locally produced materials are preferable.

- Water
  Each house unit should have a shallow water well and a sewer. Waste water from bathroom, laundry and kitchen activities should be directed to an open or closed sewer in the yard, into sewer at the side of the road.
- Indoor environment
  Modest house unit has floor area covers 12 - 36 m^2. Ventilation should guarantee airflow and flooring should be kept dry and clean, while walls and roofs should be able to protect inhabitants from solar heat.
- Surrounding environment
- Economic
- Social cultural

Sustainable housing implies having a place with privacy, ample space, physical accessibility, adequate safety, secure tenure, stability and durable structures; lighting, sufficient heating and ventilation; an adequate basic infrastructure that includes water supply, sanitation and waste disposal; appropriate environmental quality factors, directly related to health; and an adequate location which gives access to labour and basic services - all at affordable costs (UNHABITAT 2003).

Advantages of low cost apartment instead of single housing in upgrading slums and squatter settlements in urban areas are:

- Acceleration of meeting the housing need for low income community
- Job opportunity especially for low income community
- Land use efficiency and better settlement arrangement
- Efficiency of development and maintenance fund for urban infrastructure
- Elimination of energy for transportation and environmental control
- Environmental conservation as well as food reserved defence
- As factual physical instrument in changing the inhabitant lifestyle from living in suburb to living in conducive urbanized
- Increment of post construction/occupation tax through tax and regional retribution as well as development of surrounding region

PRINCIPLES of Sustainable and Ecological Social Housing
Social Housing **= Sustainable** Housing

Low **building** cost ⇒ optimal use of space, materials, existing infrastructure
Low **maintenance** cost ⇒ long lasting building components and technical equipment
Low **living** cost ⇒ reduced energy and water consumption, use of rainwater and solar energy, public facilities nearby
Low **life term** cost ⇒ adaptable, accessible

Source: Sustainable Social Housing in Flanders, LEnSE, Brussels (VMSW).

However sustainable building solutions should also incorporate the functional lifespan considerations of the dwellings as well as the fact that different parts of a building have a different technical lifespan, whereby the end-of-life environmental effects of the building are particularly taken into account (Brand 1994). The reason for this is that although buildings are generally designed for a very long, not to say an indefinite service life, many buildings have relatively short functional lifespan. This means that after a certain period of time a building does not longer fit for the function for which it originally has been developed, due to reasons such as changing functional requirements, urban re-development and the quality of maintenance (Post, 2002). Deconstruction possibilities for example should be investigated when designing a building that is not likely to stand for a long time for one reason or another (Kibert 2003).

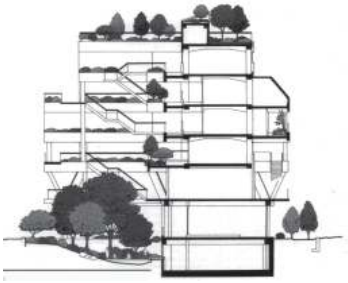

Figure 2. Example of structural frame for disassembly

4.2 Flexibility

Friedman (2007) postulates that obsolescence and demolition are prevented when dwellings are designed for adaptability, are flexible and can easily modified to accommodate the needs of subsequent occupants. In conclusion, it can be stated that *Sustainable life span based housing* incorporates essential requirements generated from considerations of technical, social, environmental and economic issues in compliance with building codes and regulations as well as the lifespan of the building that should match the expected functional /economic lifespan of the building thereby particularly taking into account the end-of-life environmental effects.

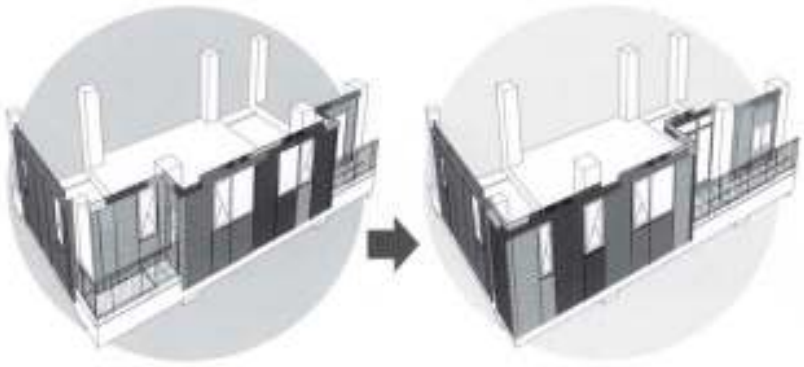

Figure 2. Example for Transformation of the external envelope (Durmisevic, 2006)

4.3 End of life environment

Most of the buildings existing today however were not designed for deconstruction. There is no consensus on rules, guidelines, or principles for design for deconstruction in architecture, nor are there well established models for design for deconstruction (Crowther, 2001). There are many gaps in literature related to sustainable building design and technologies, decomposition, reuse and recycling of building elements due to the infancy of the field. End of life scenarios and deconstruction of buildings is a young research field (significant literature and models began in the mid 1990's). (CIB, 2005; Kibert,2003; Crowther,2001). This emphasizes the significance of the integration of the lifespan concept in the design considerations.

To overcome the existing housing backlog for example Indonesia planned to build 1.367 million subsidized house units, facilitate subsidized credit for 1.94 million organized housing construction and 1.2 million self - built housing units and assist improvement of 1.35 million unit houses by 2005-2009 (UN 2004). Given the fact of overpopulation and land scarcity at the island of Java, most of them will be buildings of low cost apartments with a size of 18, 21, 27 and 36 square meters (Indonesian Housing & Settlement Directorate General 2002). In this case, the development of low cost apartments should include the principles of sustainable lifespan based housing in order to prevent from degrading the environment. The aspects may vary and be combinations among others: efficiency, efficacy, functionality, flexibility, comfort, affordability, environmental (physical) impact, health impact, socio-economic impact, material, energy, water.

5. SUSTAINABLE DEVELOPMENT PROBLEMS

Environmental problem

A massive proportion of the use of natural resources and harmful emissions into the air, water and soil is concentrated in urban settlements. Heavily populated overcrowded urban areas have to face deplorable conditions of environmental sanitation and dilapidated habitation, hazardous location and vulnerability to serious health risks. The present way of building construction has a large impact on environmental sustainability and does not take into account the functional lifespan of buildings and building components.

Social and economic problem

Many countries including Indonesia have to face an enormous housing backlog especially for the lower income households in urban areas. The housing conditions in many overcrowded urban settlements are improper for habitation, infrastructure, services and physical facilities are still limited, clean water is difficult to get and sanitation is improper. Most people in the overcrowded urban slum areas have a relatively low income level, low level of abilities, knowledge and skills which often does not support any change in their dilapidated habitation. The institutional funds to improve the housing situation are limited. Official housing programs often fail because of their lack of adaptation to the economic and social requirements of the residents and do not contribute to social and economic sustainability.

Technical problem

Present building designs and applied building technologies were not particularly developed by taking into account neither the requirements for sustainability, nor the functional lifespan of the building and building component. Buildings and building components have not been designed for disassembly. Innovative design concepts, building technologies technical solutions taken over from elsewhere in the world do not always match climatic and natural environmental context.

Although Design and Building Technology innovations on one hand are expected to facilitate in offering the means for reducing ecological footprint of human activities concerning the built environment as well as for increasing productivity and socio-economic development, on the other hand those innovations also can be a major cause of many environmental sustainability problems.

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SUB TOPIC 2

Stakeholders role in transfer of information, technology and empowerment to the community to improve lives in urban slum area

2 - 1

How to Create Eco Communities to Support Sustainable Estate Management in Slum Upgrading Area

Wakhidah Kurniawati

ABSTRACT

Estate management is one of the important elements to maintain the sustainability of slum upgrading in urban area. Improving lives for slum dweller includes activities as follows: maintaining the comfortable living, cleaning and healthy of the place, managing the water and sanitation, and keeping the environment of slum upgrading area. As far as we know, there is no good lesson learned from estate management in slum upgrading. Usually, estate management is implemented in the real estate development. In slum upgrading, dweller is a part of community management. And in the community management, there are many commitments to maintain their place and environment. Because, actually, the slum upgrading has many problems, such as: building problems, an unhealthy living condition, poverty. and dilapidated condition. So, we need a formulation of development guidelines to solve the problems. Interrelated with these conditions, the proper strategic to designing the place's image and to solve the problems is creating the dweller as a part of estate management to keep the sustainability of this area. And the best solution is creating eco communities in slum upgrading area. An eco community is the community model that fosters the local population (especially children and youth, women, elderly people and patients with mental illness) to concern their housing and environment. Concern to maintain the hygiene and healthy; manage solid waste management; keep the environment green, etcetera. It instils in learners values of conservation, respect for nature, promote a sense of consideration for others and readiness to cooperate and teamwork in community initiatives. Before eco community model implementation, many analyses have been proposed for creating the proper strategic. There are

Analogies Comparative Analysis and Descriptive Normative Analysis. The result from these approaches indicates dweller's awareness of the place. After measuring awareness, and understanding the dweller's current condition, we can deliberate the strategies for eco communities according the characteristics of the place. in spite of encouraging the local community we can correct the negatives condition of the place with negelcting the negative sides and emerging a positive things. While the problems are solved, we can retain the sustainability of the place and keep the dweller spirit, and it will considerably enhance the character of the whole slum upgrading, and help define an image for urban area.

Keywords: eco communities, slum upgrading, sustainable estate management

1. PREFACE

Slum upgrading is a process to rearrangement or restructuring of the neglected parts of cities where housing and living conditions are appallingly lacking. Slums range from high density until sprawling at the edge of cities. Some areas are more than fifty years olds; some of them are land invasions just underway. Slum upgrading or slum improvement its simplest it has come to mean a package of basic services: clean water supply and adequate sewage disposal to improve the well-being of the community. But fundamental is legalizing and 'regularizing' the properties in situations of insecure or unclear tenure (The World Bank Group, 1999-2001).

Based on Cities Alliance website we know that slum upgrading consists of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities. So, the community management as a part of estate management becomes the important thing to maintain the sustainability of slum upgrading area.

2. ECO COMMUNITIES AS A PART OF SUSTAINABLE ESTATE MANAGEMENT IN SLUM UPGRADING AREA

2.1 Estate Management as a Part of Sustainability of Slum Upgrading Management

Estate management is a part of property management that covers planning, organizing, actuating, and organizing (Bloom, 1978:7).

Basically, estate management must responsible with public facilities and infrastructure in specific area. Estate management's job begins since construction process finished and the property begin operational. Estate

management also means guidance to manage a specific area in order to maintain the sustainability of the social and public facilities like: yard, school, public park, security facility, cleaning facility, garbage facility, flooding and fire control facility, sewerage facility, etcetera (http://realestat.wordpress.com/ 2008/02/22).

Usually, estate management is a result of collaborative effort by residents, committees and the estate community. It is also an essential element of good living for public housing estate residents. It has been the long-standing objective of the Housing Department to continuously improve its local estate management. According to Hong Kong Authority and Housing Department website, we know that to ensure that estate management is effective, efficient and is attuned to tenants' needs and aspirations, and to encourage residents to be more attentive to and more ready to participate in matters of their concern, we must decentralizes estate management to the local level, aims to help enhance the communication between dwellers and the management, and encourage dweller/tenants' participation in estate matters. And then the dwellers participation cans up-grade the standard or more control is needed at the estate. So, there is increasing quality services and greater flexibility to upgrade the dwellers' quality of life.

To keep sustainability of the estate management of the slum upgrading, we know that the most important element for success is commitment by all: the city, the community, and the families. A sense of partnership must be developed among them. And secondly, upgrading should meet a real need . It means that- people must want it and understand the value. To implement, we must get the institutional arrangements right, keep everyone informed and coordinate between stakeholders, and define clearly the roles of the various stakeholders. And to keep upgrading going, sustainability concerns must be a priority in financing, institutions, and regulations. Finally, estate management is the best solution for owners who wish to have their future property in a perfect and worry free condition from day one.

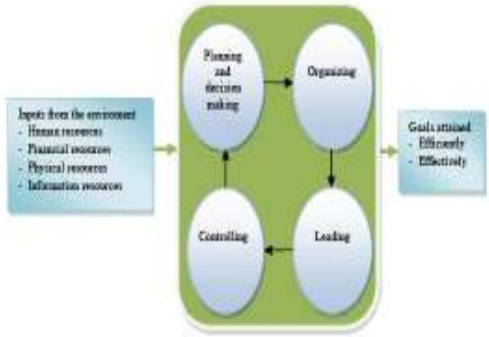

Figure 1
The Relationship between Management and Organization

2.2 Eco Communities as a Part of Sustainable Estate Management in Slum Upgrading Area

In slum upgrading, dweller is a part of community management. An eco community is the community model that fosters the local population (especially children and youth, women, elderly people and patients with mental illness) to concern their housing and environment. It Concerns with maintaining the hygiene and healthy; managing solid waste management; keeping the environment green, etcetera. It instils in learners values of conservation, respect for nature, promote a sense of consideration for others and readiness to cooperate and teamwork in community initiatives. And in the community management, there are many commitments to maintain their place and environment. Because, actually, the slum upgrading has many problems, like: building problems, an unhealthy living condition, and poverty. Many are dilapidated. So, we need a formulation of development guidelines to solve the problems. Interrelated with these conditions, the proper strategic to designing the place's image and to solve the problems is creating the dweller as a part of estate management to keep the sustainability of this area. And the best solution is creating eco communities in slum upgrading area.

An eco community is a sustainable, eco-friendly, maintaining the well-being of the community and striving towards increasing sustainability of slum upgrading area. Meaningful work, a social environment, and community activities cultivate an atmosphere of common purpose and shared experiences.

According to the new paradigms for equity and sustainability, there has to be some potential for societies to improve their quality of life. The key component of equity and sustainability is equal access to benefits of existence, and the tools essential to self development. Women, children, the elderly and the disabled, and other specially disadvantaged persons, require special attention. Women, the elderly and the children have often been relegated to the shadows in the development activities. That is way, we call them: the marginal, the silent, and the forgotten.

Now, women are playing a major role in the improvement and maintenance of the residential environment. Landscaping and kitchen gardening are areas where women can function effectively. Community tree planting can be started in settlement to combat the high rate of deforestation, and can improve life in cities. Women can also help control noise pollution made by home industries and refuse pollution caused by their own habits of garbage disposal.

Family hygiene and saving energy can be done by woman, This is because most cooking is done by women, which in poor house it is usually done on a wood burning or kerosene stove. Both are potential for fire hazards and cause of pollution. However, by knowledge about energy uses and their consequences, improvement can be achieved. We hope that the

involvement programmes, these functions have potential but are not a panacea. It will help if their roles are fully integrated into their community involvement programmes and not limited to female participation only.

Children and young people can play an important role in protecting and safeguarding the slum upgrading environment. An anti litter environmental education campaign can be directed to childrens by 10-16 years old. Based on the theory that lifetime habits are formed during this period, and the children can influence their parents' behaviour. The campaign like this has been successful in drawing attention to the pollution in the Chao Praya River and has reduced litter in the streets of Bangkok by 90 per cent (Vastu Silpha Foundation on Badshah, 1996).

The elderly and the disabled have been largely ignored by advocacy groups and governments, yet their condition deserves additional attention. The elderly can play a positive role in slum upgrading area. They can help manage some aspects, look after the children while mothers are out working, or assist in the education of children.

The needs of the disabled are similar to those of the elderly. Besides treating them as equal members of society and providing them with an equal chance, community management must institute specific disabled access codes to make the environment accessible for their use. Unless there is a change in perception, and society stops viewing the elderly and the disabled as liabilities, it will be very difficult for the elderly and the disabled to participate productively in urban development programmes.

Now, urban management and development policies are enabling the poor to do more towards providing their own improved housing and urban services than they once did. But if residents of slums and squatter settlements and those in need of shelter are expected to deliver and maintain their own facilities, the policies are required will help them to decide when, where, how, and what level of services are needed. We can place potential projects according to the ability and priority of the community and. The worksheet below shows focuses attention on community initiatives. It is particularly useful for interactive community workshops or can be used by communities themselves (See Table 1).

According to Building a Sustainable Neighbourhood website, we know that a truly sustainable community is comprised of sustainable neighbourhoods. These neighbourhoods are areas that are successful in raising caring, responsible and healthy children and adolescents. They also support the diverse makeup of families and care for all individuals, families and elderly persons because they are a part of the neighbourhood and community.

Neighbourhood organizations improve quality of community life. They keep the streets clean, fight crime, tutor children, organize recreation programs, plant community gardens, build housing and more. They are by

nature geographically based, volunteer driven, problem solving, empowering, multi-purpose and flexible (Dobson on Roseland, 1998).

Table 1 Tools Interactive Community Worksheet

	CAN DO Without Outside Support	**CAN DO WITH SOME SUPPORT** (Financial, Technical)	**CANNOT DO** But Must be done by Outsiders
NOW (Things that are of immediate importance or simple to undertake)	COMMUNITY INITIATIVES (Projects that could be quickly undertaken with direct community involvement)	~	MUNICIPALITY INITIATIVES (Projects that require more time, effort and funding to implement)
SOON (Things that are important but can be somewhat delayed)			
LATER (Things that can be delayed and do not require immediate attention)			

The top ten neighborhood strengths included the following: 1) location and access to jobs and services, 2) strong sense of community, 3) improved services, 4) availability of neighborhood-based social services, 5) presence of numerous religious institutions, 6) new housing investment, 7) reasonably priced and publicly controlled land for redevelopment, 8) presence of neighborhood-oriented businesses, 9) availability of buildings for rehabilitation and 10) the presence of an effective community development corporation (EPDC). The top ten neighborhood weaknesses included: 1) population loss, 2) extensive housing deterioration, 3) weak municipal housing demolition program, 4) drug related crime and prostitution, 5) lack of municipal investment in street and infrastructure maintenance and repair, 6) lack of living-wage jobs, 7) limited neighbourhood-based retail, 8) lack of

animal control, 9) lack of activities for children of all ages and seniors and 10) high-priced utilities.

So, an effective community development corporation (EPDC) can be created by community management that established in this area (we can call it as an estate management). And the sustainable estate management (social sustainability) is another way of discussing social capital. It requires social equity and responsible citizen. Social capital is constituted by cohesion, cultural identity and discipline. These are essential for our peaceful collective survival. Social capital can be depleted by inequality, unemployment, insecurity. Situations of this kind are socially unsustainable over the long term since they reduce everyone's quality of life and lead inevitably to social collapse (ICPQL on Roseland, 1998).

3. LESSON LEARNED FROM INDONESIAN KAMPONG IN SEMARANG

In Indonesia, slums area usually occurs in Kampongs. According to Sulivan, 1980 (in Haryadi, 1980 in Adhisakti, 1997), there are three types of Indonesian residential area. The first type is the well-planned, well-serviced and equipped upper-income districts in which every house is on the road and can be reached by car. About 10% of Indonesian city families live in this type of area. The second type is an old form found throughout urban Indonesia with a majority of urban residents, called as legal kampong. Different from the first type, the houses inside this area cannot be reached by car or any other means of transport wider than the average human being. The third type is the squatter settlements that have been founded by squatters without any general planning on the most marginal, unattractive land, usually government owned. This type known as illegal kampong. But sometimes, most of them are combining from legal kampong and illegal kampong.

One of the popular kampong in Semarang is The Old Multiethnic Kampongs along Semarang River. Nowadays, the areas become parts of Semarang Old City undergo a physical, social, and economical degradation as a result of decreasing environment's quality. This degradation was started from 1970s when the Old City Area got trapped on the flood problem, which can not be handled until today. The existence of flood is influenced by the development of lower area of Semarang that is very fast since early of the New Socio-political Order until today.

Furthermore, the old city (included the Old Kampong along Semarang River) is included the 'rob' (tides/drowning) area. Tides, flooding, and drowning are the chronic problem, causing extensive damage to settlement everyday. High tides occurs everyday. The recent improvement project has attempted to combat this condition by building up the street level. However the scope of these improvements is limited and progress is slow. Also, the raised sheets have diverted water into the residential properties (Aldrianzah, 2000). In many kampongs (Malay Kampong), the ground water is polluted by salt-water intrusion.

Beside that, the environment degradation is caused by the silting up of Semarang River. When the Dutch was still governing in Semarang, the depth and the cleanliness of Semarang River were always under controlled. In the year of 1985, when the local government conducted a river normalization project, the turning bridge was being wrecked, with evidence that the bridge disturb the smoothness of the river flow.

Beside flooding, drowning, and tides problems, the others problems are poverty, crowded, sanitation, and building conditions. According to Aldrianzah, etcetera's (2000) research, most of the old Kampong (except: Pecinan, Kauman, Petudungan) are in poor condition, as the people constantly deal with poor drainage, water stagnation, poor sanitation, the dumping of waste all over the place including in the drains, and the encroachment onto public space, especially along public footpaths.

The quality of buildings varies considerably. Many are dilapidated and drowning. A Kampong Improvement Program of the Indonesian government has raised the level of roads and paths by 50 centimetres. Some householder have also raised the floors of their houses 15 centimetres while others use minor dykes to prevent flooding. Based on data, there are 48% building that's in dull conditions, because of raised the floors of their houses.

Figure 2
Raised the floors in Kampong Melayu houses (Source: Wardhani, 1997)

The heritage buildings are being compromised by new development. As the old multiethnic kampong in Semarang, it contains variety significant heritage buildings. Their retention should be a part of any potential redevelopment of the area. However, without careful conservation and investment, they will remain dilapidated. An awareness of conservation in the community and clear urban design guidelines for redevelopment need to be promulgate.

To solve the problem, the Municipality of Semarang make an Urban Design Guidelines (RTBL) in specific area in these kampongs (Malay Kampongs and Pecinan), with seek need assessment from the dwellers. According to the dialogue between the government and the dwellers, the guidance formulated in many key issues, like:

1. To solve the flooding problem, Municipality of Semarang needs to involve the local community and private enterprise.
2. The environmental quality is deteriorating. The arterial river, Kali Semarang, is contaminated and used for rubbish disposal. So, to upgrading living standard in this area, the role of family and the women (by dasawisma) are needed to assist in the education of community.
3. The most social problem is that most of the people are unemployed and the remainder is employed in unskilled occupations. The residents therefore suffer from poverty. Revitalising these kampongs will require enhancing resident's skills and creating opportunities for work.
4. The residents in these kampongs are lack of political and economic power. They do not have an effective community network or organisation to deal with governments and private sectors. This situation needs to be remedied.

So, this lesson learned teaches us about the important dwellers role to keep the upgrading situation in slum area. Without their participation, mobilization, and their responsibility, the slum upgrading process is nothing. The sustainable communities (we can read: eco communities) is the social capital to maintain the upgrading situation.

4. CONCLUSION

1. An eco community is a sustainable, eco-friendly, maintaining the well-being of the community and striving towards increasing sustainability of slum upgrading area.
2. The key component of equity and sustainability is equal access to benefits of existence and involve the community and specific subgroups such as women, children, and the elderly.
3. An effective community development corporation (estate management) can be created by community management that established in this area.
4. The sustainable estate management (social sustainability) is another way of discussing social capital.
5. The role of subgroup eco communities that can enhance the estate management sustainability are:

Women	• playing a major role in the improvement and maintenance of the residential environment. • Landscaping and kitchen gardening • Community tree planting • help control noise pollution made by home industries • manage garbage disposal • Family hygiene • Saving energy
Children and young people	• protecting and safeguarding the slum upgrading environment. • An anti litter environmental education campaign • can influence their parents' behaviour
The elderly and the disabled	• manage some aspects • look after the children while mothers are out working • assist in the education of children.

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2 - 2

The Space Feature Element upon Dense Settlement in Downtown toward Social life Harmony
(Case Study: Kauman Kampong of Semarang)

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Galih Widjil P[3]), Nurdien HK[4])

ABSTRACT

The old-settlement in downtown (Kampong) is grown traditionally through a long time social process. Inside its oldness, there has been some degradation in both spatial and social life. The current space became more crowded at that time filled with many activities. Furthermore, the commercial business pressure of downtown had made some function intrusion inside space kampong area. As a space developed by time, the dense kampong of downtown tends to be slum area, but it has specific meaning for its community. The transfer of values by social relation arrangement and culture ideas that has been inherited becoming a tradition-way to solve the problem of limited space against a high activity intense.

The dense row house has been designed without fence to accommodate social relation, a little terrace as a transition space; a narrow alley curved connects controlled places. Those were managed by culture roles and social conventions. Consideration of feature elements has been chosen. They were related by using the feature elements of fixed, semi-fixed and non-fixed one.

Observation was arranged upon Kauman Kampong that is located upon Semarang downtown so that it has experienced heavy pressure of commercial-business center. Nowadays, this kampong is still exist with a

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strong local character. For this method of analysis, the researcher used ethnography-architecture method that concern with understanding of how community organized their space (the idea), and then how they used this culture in their life.

Keywords: dense settlement**,** space feature element

1. SPACE THOUGHT

Upon these four decades, the thought of mind has shifted to the significant parameters. Cullen (1959) stated the theory upon the townscape. Moreover, it changes into the morphology stress; three elements of city morphology, which are (1) road network, (2) building, (3) functions Johnson, 1981 in Yunus, 2005:108). Upon the part, it is seen that the view of townscape is upon the geometrical planned city or regular and unplanned city or irregular (Spreiregen, 1965, Lynch, 1984 & Koztof, 1991). Then, Hanson, Hillier and Peponis (1987:218) called the regular and irregular that is differed upon the feasibility of the contented meaning or massage.

It seems that the space definition does not only provide stress upon spatial physic, road network, and function but also on the social condition that has been influenced by morphology.

Whereas, the meaning of space was stated by Trancyk (1986:97) in one of his thesis related to the theory of place that focuses on the relation between space and culture of human, history and nature. Trancyk (1986:12) stated that every place is unique carrying certain character of the circumstances. This character consists of material, form, color, texture, and abstract cultural value. Completing the discussion on social-culture Hayden (1991) in “The Power of Place” was explained that the local culture along with the architect has created history of urban social, including the element of history, culture, and production spaces. According to Lefebvre, producing a space could be also like producing certain commodity, as long as it is the result from capitalism or the result through the urban idealism that is related by the social life along the time. In the other words, space is non-political object that is a determining moment (social-culture).

Rapoport (1977:20) defined space through the arranging elements. According to him, space is a structural union of the physical elements and human within. He considered the importance of regulations upon the form of values and norms, since they will differ places from one to another. Regulations influence the way of society interacting and arranging the space and time. Furthermore, Rapoport (1995) argued the importance of the social-cultural value upon the establishing of cultural-supportive environment. The mentioned principle is that by the locating of time, material, and symbols of culture. Rapoport explained the importance of system of space, time, and communication upon the discussion upon the space.

The other perception is from Pangarsa (2006:27) that stated the existence of other dimension that is energy, forming character of a space. This Transcendental spatial aspect[5] that makes space viewed having energy and makes the space dweller could feel the situation of comfortable, frightened, chilled and others. He stated that if the space energy were upon the large scale, it would give influence to the social environmental character, since it is moving upon the social communication process. Inam (2002) stated that contemporary critic upon the city planning, since the field was considered indistinct among the science principles including architecture, landscape, city planning, and civil engineering. Inam has observed the importance of understanding the local phenomenon condition. The concept focuses on the thought of the approach of society subject through the exploitation of social culture and sustainability. Moreover, he proposes the approach of comprehensive city space planning, including the approach of teleological, catalytic, and grounded[6].

Thus, it could be explained that space always moves and shifts, and completes each other. It is from the definition of physical aspect, morphology space, meaning place, and social culture that is moved by time-space, communication, and energy. Together with the critic of the modern perception, which stresses the universalism, individualism, and efficiency, a shifting to the postmodern one that stresses the culture relativism and reward to the subject subjectivity has happened[7]. Upon the view, it is possible to explore space upon the human existence upon the real meaning, which has a role behind “the creation of a space”.

2. METHOD TO INTERPRET THE SPACE CULTURE

The space scope of architectural ethnography-space will arrange the point of view of community as the main purpose of the research. The research limits the problem upon the single/ simple case, and exploring it in detail on the purpose of discovering the hidden and abstract thought. The method focuses on community perception through in-depth-interview and participative observation. Thus, ethnography will reveal the science fact from the point of view of the society as the achiever, because of the existence of the particular cultural space.

According to Spradley, there are three steps in the ethnography observation, which are: (1) the observation of broad description to gain the

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[5] *Space transcendental aspect, spatial aspect related to spiritual objects.*

[6] *Teological approach is derived from conventional science discipline, catalytic approach is generated from the socio-economics science and humanity values, and grounded approach upon every case has humanity value (Inam, 2002).*

[7] *Subject subjectivity is the way of view that puts science (subject) from the achiever, upon the method of respecting, understanding, and comprehending as a creation, not the way to measure with another theory.*

situational description; (2) observation focus by narrowing the research; and (3) selective observation. The ethnography study provides stress to participative observation as the main mode upon the data mining. Participative observation or direct observation as the participant has a purpose to acknowledge what is upon individual-society, and the instrument made and used to support the settling tradition, upon the research, it is completed by acting as the participant upon the society of Kauman. As the instrument to communicate to the informant, participative observation possesses many advantages, the researcher will involve directly upon the society's life, sometimes as the insider at the same time as the outsider, upon the case of avoiding getting subjectively involved.

3. KAUMAN SEMARANG URBAN KAMPONG

The history of kampong in Semarang started approximately in the end of 15th century. One of the oldest inheritances is Kauman kampong, because, it has been developed since the first establishment of the mosque in Bubakan area in 16th century (Budiman, 1977). In the end of 19th century, Dutch suffered loss within wars in many places. This condition forced Dutch to sell land upon the area to the landlord; one of them was Kauman. After that, the landlords rented it to the incomers who were dominated by traders and Moslem students, which came from out of the town that used it to stay and inhabit. In the beginning of 1900s, the incomer started to come and stay through the method of renting the parcel of land from the landlord. The rented land had a width of approximately 7x21 m². The measurement recalls the model of wooden traditional building construction that was appropriated to that past period technology application. Such kampongs are often recognized in Semarang, such as Gandek Puspo, Kulitan, Jeruk Kingkit, etc. with the linier road network with the appropriate dimension (2m) for the inter-kampong moving facility.

During the independent time, the territory was getting more crowded, together with the growth of the city to become commercial territory, the unplanned kampong pattern was undeniably getting crowded, viewed from the irregular pattern of the road that is narrowed and widened. This was the effect from the road authority method. Familial and social system was admitted by the society.

The linier shape did not experience changes. The changed form was the content. From the interview, the kampong (horse saddle) roof traditional house, symmetrical façade form, with three passages of door, and the lengthened small terrace in front that was lifted a bit. The shape is usually recognized in the area of Javanese kampong and it is the simplified version of the landlord house. This form is also familiar in the area of Demak and Jepara whereas the difference is only upon the use of *pencu* roof shape.

During the post-independent period, there was no significant change except the density that became worse, causing the less of opened space except the road. An alley with the strong corridor was caused by building upon the both sides that were closed. The non-fence building and the terrace that was directly closed to the street showed the friendly and high social relationship.

4. SPACE FEATURE ELEMENTS

Space feature elements are spatial elements that influence the form or performance of a space. Those elements could be categorized into: (1) Fixed feature element, (2) Semi-Fixed feature element dan (3) Non-Fixed feature element. The spatial thought fix-ability emerges after observing the developing space because of the growth of human activity over the fixed space. Thus, the categorizing of space in here is determined by factors of arranging elements, space and activity spreading. Therefore, space could be categorized as:

(1) Fixed Space
It is a space that is arranged from permanent spatial element and the high land covering level. It has a fixed function and the limited space. The occurrence of the fixed space is caused by the effort to develop space for particular activity, then, it is strengthened by the land authority by individual or private institution, such as public facility or commercial space and dwelling building.

(2) Semi-fixed Space
It is a space that is arranged by fixed spatial elements but it could be moved or semi-permanent. It has a fixed function as well as temporal one. The occurrence of the space is caused by the expansion of the fixed space to accommodate the environmental condition. It is owned by private such as terrace.

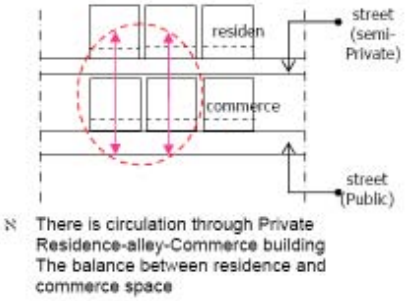
(3) Non-fixed Space
It is a space in that the performance is uncertain and opened (has no covering). It has a significant primary function as well as secondary one upon the high intensity. The occurrence of the space is caused by the use of public space that is subsequently used for the other importance suppor, such as opened space and street.

4.1 Dwelling

The dwelling function spreads in the kampong, mixed with the social religious activity that leads directly by Muslim teacher or leader. The tradition develops widely upon the village Muslim students, whereas, after their graduation, they will spread the ideology to the surrounded society.

The entrepreneur and trader in the main corridor buy building upon the backside of their stores, which is the expansion of the commerce and accessibility. Upon the backward of the stores, separated by small alley, there are residences upon the bigger parcel of land. They are the residence of the storeowners. There has been tendency to use the building as the expansion effort of the business. Because of the matter, upon the row, the residence faces backward of the stores, this causes the difficulty to reach the direct access to Kauman Street. In the other words, the residence row is a private space when it joins to the store that is public. Together with the row of stores, the pattern of the row looks different from it is in the prior built alleys.

Diagram 1 :
The contribution of Public Space for the private activity in Kemplongan Kampong



N There is circulation through Private Residence-alley-Commerce building The balance between residence and commerce space

N Penetration of space funcion from residence to commerce

Source: Analysis of Researcher

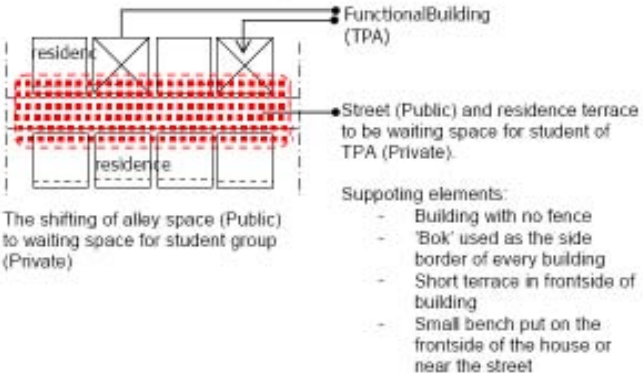
4.2 Social-Religious Education (Children School of Koranic Study/TPA)

The class construction of TPA that is derived from the function shifting of traditional residence possessed by earliest Islamic leader that was donated

(*wakaf*) for the activity of TPA. In the row of residence there is one building used as TPA which is scheduled as follows: morning class: 7.00-10.00 AM and afternoon class: 3.00-5.00 PM.

The activity of the mentality reforming toward the student has completed like a habitual order in Kauman, the activity is like a reproduction space that teaches the religius-spiritual mentality of the young generation in Kauman. The limited space is not a problem as long as it still can play the role to accommodate teaching and learning activity. The function shifting of the residence to the Koranic study place is commonly happened, for the society, the meaning of religious school is sacred and it has been a noble duty for them to continue it. Shifting function to a commercial function tends to be stronger, which spreads from the outer spatial part that spreads slowly to the middle and inside the territory. It shows that the adaptive people thought toward the environment and the dynamic of coastal society that is opened upon the internal response received. The inner residence mixed with the commercial activity that supports the main commersial function in front showing a high social economic sensitivity. Meanwhile, the social-religious function lies upon the middle of the territory that is managed by the Moslem students. The function shows the big role upon the controlling of the society's mentality internally, the motivating of the meaning-energy from inside to the all other functions so that it gives influence to people spiritual mentality.

Diagram 2:
The conribution of public space for the private activity in Pompa Kampong



.

The structure of space management is divided into commercial zone upon the frontside with a very easy access, and then social-religious zone upon the middleside with a limited access, and residential zone with the very limited access. The zones are related by the road network upon the limited-linear that stands as the controller of the access as well.

4.3 Fence

The fence or the parcel of land's border does not exist upon the original building. This phenomenon could also be seen in other locations. The similar pattern is also seen on the large land managed by the landlord, even the residence of the landlord does not need border, once because of the limitation of the managed land, whereas, almost100% of the parcel of land are covered by buildings. Fence is also considered not necessary because the neighbours are their relatives. The non-existence of the fence makes the narrow street in front of the house looked wider. So that, there has been a function overlapping, which is street could be private and terrace could be public.

The use of the space is more varied and efficient, since they have no doubt to develop the building vertically, although the used fence is upon the category of low and transparent, they choose to use fence upon the safety consideration.

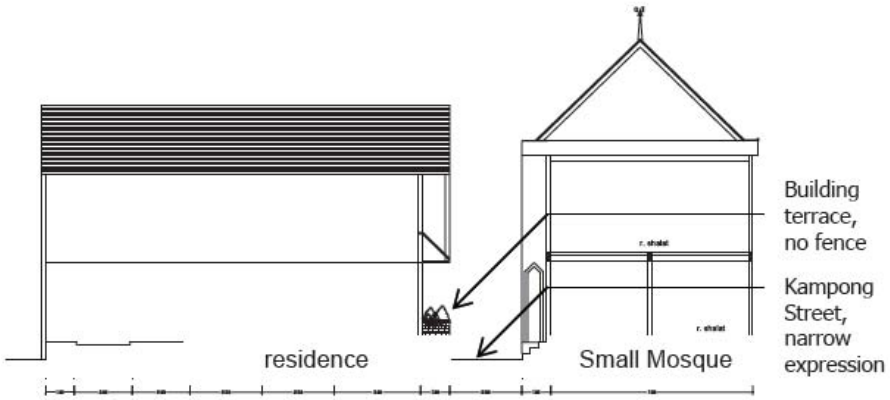
Figure 3 :
In Pompa Kampong the activity of Children Koranic Study (TPA) is held. The activity is in the morning and in the afternoon.
Source: Field Survey

4.4 Terrace

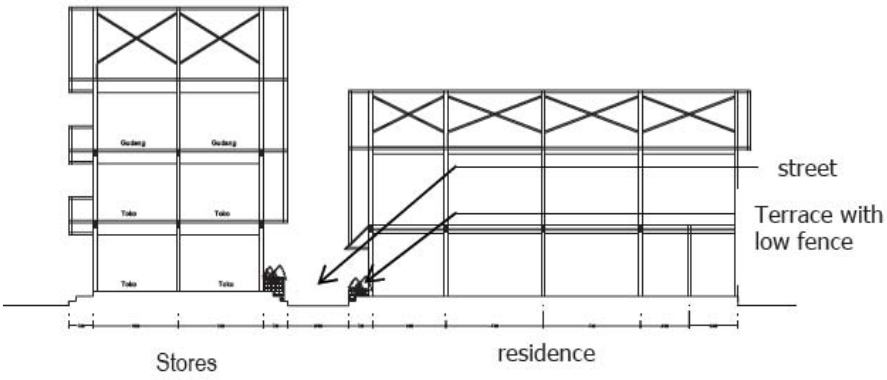
Terrace stands as well as the link between building and Narrow Street in the frontside. The front terrace is a part of an opened building that is bordered with front façade with the living room. Frontside terrace, commonly called as

tritis, is covered by *tritisan* roof that is the extension from kampong traditional one. The small terrace, previously, was lifted a bit from the ground surface, so that it looked like the building feet, however, subsequently, the feet were drown caused by the elevating of the street in order to avoid flooded. Upon the original building, the terrace is not considered joint with the street since there was no fence, which caused the mentioned overlapping.

Upon the new building, there has been line of the parcel of land through the fence. The building terrace is lifted upon the height of ±1.00m from the street surface. The new building possesses wider terrace, and more liberated form. This terrace is a link from the street to the main door of the building and so that the opposite, the pattern looks different and separating it with the traditional.



Picture 4 :
The slice of Pompa Kampong; the comparison between street width (2 m) and building height 1 to 2 story (8 – 12 m), making the opened space narrower.
Source: Analysis of Researcher



Picture 5 :
The slice of Kemplongan Kampong; leftward, block of stores and rightward is residence.
The street looks narrow with the comparison of d:h = 1:5. performance of low fence with the small terrace in frontside of the building making a friendly space sense.
Sorce: Analysis of Author

5. THE SPACE FIX-ABILITY

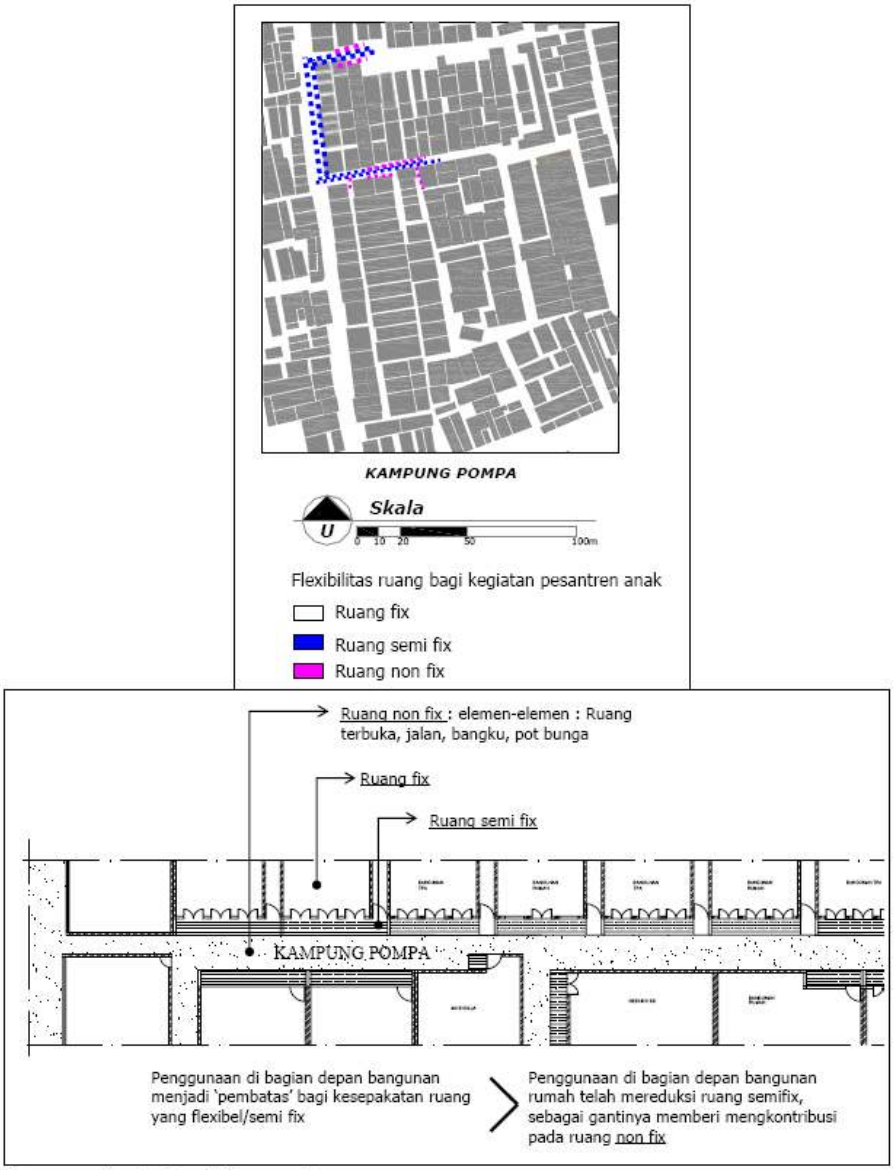
The occurrence of semi-fixed and non-fixed space is caused by the land limited condition that is contradictive comparative toward the functions (of the work) (Fx) = W Land/ Function. The space previously was planned for the residence on the limited parcel of land, so that during the time there will be public service function (social religious activity) that was admitted by the community, and accommodated by them with the management of space fix-ability.

For the Javanese, the residence cannot be separated from the yard, and upon the place, there are houses with no yards. It is happened because of the shifting of the landlord perception that is influenced by the Dutch that developed housing block with no yard upon the old city or following the housing block in Chinatown Thus, the land could be lent with the economic price.

The orientation of building to North-Southward shows the influence of cosmological thought that considers South-Northward as the sacred direction. Thus, there is East-Westward corridor; which is according to Javanese ideology, this is the working direction of terrestrial energy .It means that Pompa Kampong has given the correct space for the terrestrial energy to work. Upon the Islam perception East-Westward axis is an axis of sacred prayer direction (*Qiblat*), so that Pompa Kampong possesses the sacred orientation.

The existence of terrace upon the Javanese house is a transition space to the more polite character, derives to the better morality in Islam ideology.

Islam is based upon Koran and *Hadist*/ Prophet Muhammad guidance that teaches Moslem to establish *amar ma'ruf nahi munkar* (struggling the rightness and fighting the crime). The morality establishment is part of the ideology to be completed that is understood by the people of Pompa Kampong, so that sharing the space is not a matter for them, since using their terrace as the semi-fixed space will gain reward for them. The mental management completed upon the Koranic review group is to stimulate the energy to their belief and thought so that they coul comprehend the meaning of their spaces. Thus, there is an informal agreement upon the society to support the social-religious activity in public and private space of Pompa Kampong. The commerce principle gained from the parents is learnt rapidly, without being in formal education. Through commerce Kauman people could receive enough profit to support the activity of *amar ma'ruf nahi munkar.* The people of Kauman could not be separated from commerce life.



Source: Analysis of Researcher

Picture 6:
The Space fix- ablility for social-religoius education

TABLE 1:
SPACE OF SOCIAL-RELIGIOUS

Space	Usage	Achiever, relation, contact intensity	Form
1. Fixed-space	-importance (1) social public-religious: meeting, education-conseling of social-religious: Islamic school activity, children Koranic study, Koranic review, ritual religious, selebration, etc.	-Achiever: people of Kauman, outsiders. -social relation: teacher-student, leader-follower. -contact intensity: high intensity.	-Building of sosial-religius: Islam educational institution, Group of Koranic review. Possessed by individual/ institution or government. -residence possessed by individual
2.Semi-Fixed space	-importance (1) social private: individual daily social activity; (2) limited social-public: Koranic review, ritual religious like ceremony of birth, death, marriage, (3) public: student's waiting relative	-Achiever: Kauman's people as particular, small outsiders. - Social relation/ intensity: very high; owner-guest, teacher leader-student/ high; student's waiting relative/ high	-terrace of residence possessed by individual/ institution
3. Non-Fixed space	-importance (1) social-public-religious: activity of sosialization of students, religious sacred day ceremony, student's graduation; (2) social-public: activity of socialization of individual/ dweller.	-Achiever: Kauman's people, relative, outsiders. -social relation/ intensity : teacher leader-management/ majlis taklim/ low; teacher leader-student/ high; students/ high; trader-student/ high; Kauman's people/ high, Kauman's people-outsiders/ high.	-road space, opened space, building terrace space possessed by government, individual/ institution.

source: Analysis of Researcher

TABLE 2 :
SPACE OF SOCIAL-ECONOMY

Space	Usage	Achiever/ Relation Intensity	Form
1.Fixed space	-importance(1) social economy: commerce/ trading, production, workshop, warehouse.	-achiever: Kauman's people, outsider. -relation/ intensity: entrepreneur-customer/ very high; enrepreneur-worker/ very high.	-Chainstores, store, others, residence.

2.Semi-Fixed space	-importance(1) social economy: production activity,	-achiever: Kauman's people, outsider. -relation/ intensity: entrepreneur-customer/ very high; enrepreneur-worker/ very high.	-building terrace possessed by individual/ institution
3. Non-Fixed space	-importance (1) social economy: movement activity for social economy.	-achiever: Kauman's people, outsider. -relation/ intensity: entrepreneur-customer/ very high; enrepreneur-worker/ low.	-street space, opened space possessed by public.

Source: Analysis of Researcher

The limited space in Kauman possesses important role in the urban life. Kauman is able to show the existence as the center of the mental social spiritual-religious management in downtown. According to the space expression, Kauman functional settlement is a space of mental-spiritual production of the urban society that plays important role upon the management and development of mental-social of the new urban generation.

6. CONCLUSION

Since the latest four decades, the thought of space have been shifted to give a significant appreciation for human being culture as the main target of space development. The local theory explored with inductive approach to comprehend the real science.

Generally the primary problems of urban kampongs concerns with land insufficiency compared with high intensity of enthusiasm, especially at ethnical kampongs.

Management of space feature elements earn to enable this limited space of kampong become rich in several things, those are: the arrangement for domestic activities and also external activities.

The Space feature elements are divided into three categories: (1) Fix, (2) Semi Fix and (3) None Fix. The fix feature of space includes: permanent building such as house building, house of economical used or building of social-religion education. The semi fix feature of space consists of the building terrace with elements such as curtain, a permanent bench, furniture and so on. The non fix feature of space consists of alley with alley furniture.

The dwelling function, has a close relation with commercial function. The division of public and private are the important thing; contribution of public space for private activity or on the contrary; include one of them is

social space contribution for commercial activity. This represents a convention result between the social group, which is constituted by a balance idea between social life and economic life.

At the social-religion education function part, it seems that a private space has a significant contribution to public activity (social-religion education). The social agreement happened with a contribution of house terrace and by left a house fence. In here, space has a function of social mental construction of community which intended for re-generation preparation,

Fence and terrace of the building represent an important element of space feature elements in Kauman kampong. The house fence unused will extend public space (alley) and the extension a head for the house terrace in alongside the corridor. This will be very useful for the domestic activities and also for external activities. In here the space has meaning as togetherness space.

In this case, it looks like the management of balance creation between social-economic-and religion spaces. That is the independence character of community. Although independence support in social-economic-and religion space, but there are depending much in physical to environment surrounding, especially because of access with external world. So it would be important to protect this from any kind of trouble.

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2 - 3

Toward Sustainable Development through Community Based Housing Development

DR.-Ing. Asnawi Manaf

ABSTRACT

Since last decades the Community Based Development Approach has been widely discussed and even accepted in development activities particularly in developing country. In Indonesia, there is a Program called Community Based Housing Development, which deals with the issues related to housing development for low income people. This approach is strongly "campaigned" both by government and or non government institutions until today.

This paper examines the implementation of the Programm, which is seen as an alternative way to "enabling market to work" and outlines issues, challenges and constraints faced in the implementation process. The qualitative research method ('participatory action research') has been employed, where the researcher was also partly involved in the implementation process as an observer.

From this research conducted from 2000-2005 the researcher found that such program is less compatible or not feasible economically for "the poor", so that the program is not sustainable. However, the program has potential to help "the low income people", who are actually able to pay but politically discriminated.

Researcher conclude that issue of the unsustainability of the housing program in Indonesia does not lie in the "limit" of the market mechanism (market failure) only, but also in the unfair accessibility for the majority of low income people to the key resources in housing development (state failure).

Keywords: Community based Housing Development, Enabling Market to Work, and Low-Income People.

1. INTRODUCTION

Shelter and its supporting basic infrastructure such as safe water, electricity and sanitation are human basic needs that must be accessible for all. However, in 2003 it was ascertained, that in Indonesia approx. 6 milion families still had not adequate house. They live either together with several families in a very small housing unit or in the slum-areas. This number of slum-areas raises countiniuosly as the result of the urbanization process, which also happen unmanageable and permanently.

To solve the problem of the housing shortage national housing authority of Indonesia introduces a program called Community Based Housing Development as an alternative way to “enabling market to work”. This program is based on “the demand driven approach” as an antithesis to the conventional one (supply side approach). The supply side approach is seen as not compatible for the poor in term of the “normal” market economy.

To evaluate the implementation of the program, this paper will examine the practice of the Community Based Housing Development Programm in Semarang and outline issues, challenges and constraints faced in the implementation process. Two Community Based Housing Development projects in Semarang will be choosen as case study, namely: the CBHD project Pudak Payung and the CBHD project Bangetayu.

These two projects were intended to choose because these two cases have significant difference: the CBHD Pudak Payung represents the poor community and the CBHD Bangetayu represents the low income community. The used poor in this article means that most of the participants in CBHD project Pudak Payung work in the informal sector, even they have no permament job, whereas “the low income community” means that participants in CBHD project work in the formal sector (civil servant).

To outline issues, challenges and constraints of the program implementation the qualitative research method (‘participatory action research’) has been employed, where the researcher was also partly involved in the implementation process as an observer.

2. COMMUNITY BASED HOUSING DEVELOPMENT APPROACH (AN ANALITICAL FRAMEWORK)

In contrast to the conventional approach, where the professional contractor (as the third party) is appointed to conduct the construction activity, the community based housing development approach entrusts the people (as the end user) to build their own houses by employing their own skills and know-how. UN-HABITAT commonly refers to this approach as “Community Organized Shelter Construction or People’s Housing Process” (Tibaijuka, 2007 and Dercon, 2007).

Moreover Dercon (2007) asserts that “people’s process recognizes people’s organization and encourages them to execute development programs, which build on their own skills and know-how”. In implementing this program the government or non government institution provides assistance directly to the communities. The community will be encouraged to identify their own objectives and facilitate them to work out a plan (Community Action Plan). The community, which has been grouped in a so called Community based Organization (in Bahasa: Kelompok Swadaya Masyarakat or KSM), then submit the plan to Institutions, which has relevant program or interest on the issues related to the housing for the low income people.

In case of the CBHD program, the national housing authority of Indonesia (MENPERA) has prepared the so called TRIGUNA loan scheme to stimulate people to conduct the program. This loan was organized by the Bank Tabungan Negara (BTN). The TRIGUNA loan can be accessed by the CBO (Community Based Organization) that was organized by the so called Developement Consultant (In Bahasa: Konsultan Pembangunan or KP). The loan will be disbursed over three separated stages. These three stages of fund disbursement are used as an instrument to monitor and evaluate the progress of the project. For stage one, BTN disburses 30% of the total amount of the project value, in the second stage 45%, in the third 25%. At each stage, the project’s progress is evaluated. The evaluation result justifies whether the project should be continued, or be corrected or even terminated.

Manaf (2007, 2008), Wijanarko and Kartiko (2008) suggest that through this community based approach the program will hopefully be: encouraging active involvement of the community from the early stages of the process; strengthening the community’s decision-making ability; enhanching social accountability, sense of belonging and the sustainability of the project. The involvement of the people in the whole process is assumed as much more important than the house itself. It is about the construction of the whole reality of the human life or livelihood (Turner, 1976, 1978, 1983 and Purbo, 1979).

3. COMMUNITY BASED HOUSING DEVELOPMENT: TWO CASES IN SEMARANG

As mentioned above, this research concentrates on two cases in Semarang (CBHD Project Pudak Payung and Bangetayu). Choosen these two cases in the same city (Semarang), It was expected, that these two cases will have the same political, socio economical context so that it can be compared to each other proportionally.

3.1 The Implementation of CBHD Project Pudak Payung

The process of the CBHD project Pudak Payung began with a public announcement issued by YABAKA (an NGO in Semarang with long lasting experience in empowering the poor to have adequate shelter). The YABAKA informed the people through a method called "oral propaganda" (Javanese: gethok tular). This method is very effective and cheap to access the target group comparing to the publication method commonly practised through the newspaper or in the other mass media. Through this “gethok tular” method, someone, who firstly had the information, hopefully, could inform to others further, for example their close collegeaus, neighbourhoods and so on. If they are interested they would come to YABAKA office to find out more detailed information on the CBHD program.

If the number of participant candidates is already big enough (approx. 40 persons), YABAKA will then invite them to follow a socialization meeting, in which all about the CBHD program and the consequences in the implementation process will be informed and discussed. If they are interrested to join, the participant will be organized in Community Based Organization (CBO). In the process of CBO establishment, the committee of the CBO will be also selected by the CBO members democratically. The committee consisted of a leader, a secretary and a treasurer. In all CBHD projects organized by YABAKA, however, there were no written rules of the game and statutes in the CBO’s group and members.

As the follow up of the CBO establishment, according to the guideline of the CBHD Program, every member of the CBO must have opened a private bank account in Bank Tabungan Negara (BTN) as a requirement to apply the TRIGUNA loan from the bank. In this bank account, CBO members will then save the money monthly and regularly, until all CBO’s members reached 10% of the total cost of the housing construction. These 10% fund called "Mitra money" (Dana Mitra). This mitra money will be functioning as stimulative money and as an instrument for the bank to assess the abilty of the lender candidates for repayment the loan in the future.

In the case of CBHD project Pudak Payung the CBO agreed to use their saving money to purchase of the land first. After that the land document (land certificate) will be used as "collateral" to get the TRIGUNA loan for housing construction. The Bank recognizes the land as a substitute of the mitra money as long as the market value of the land is more than 10% of the total building cost.

To get cheaper land, CBO Pudak Payung tried to find a big land parcel and then collectively purchase it. Because the ability of each CBO member was difference, they decided that the price was the main consideration criteria in selecting the land. All members agreed to purchase the land with the price no more than Rp. 10.000.- per square meter. With this criterion a

suitable land was found in Pudak Payung village in Semarang and in 2000 it was bought up. Since the CBO strated to save their money to buy the land in 1997, they could buy the land just in 2000. It means that CBO took 3 years (in 1997-2000) until they could purchase the land.

The land is approx. 9 kms away from the city Center (Semarang). The total land size was approx. 47,500 square meters (approx. 4.75 ha). The whole price of the land was approx Rp. 475,000,000, -. This was financed completely by the CBO members itself.

The land was split in smaller plots uniformly (5x12 square meters or 60 square meters for every member). Although every member got only 60 square meters (effective land building), it had to pay for 100 square meters. 40 square meters were planned for the street, and also other public and social facilites, like playground, public space, etc.

One challenge faced by the CBO in saving process to purchase the land was the quickly risen land price. After the CBO had collected certain amount of money to buy land, the money was not corresponded any more to land price, because the land price was increased.

Another challenge was the budget required to finance the administrative expenses. The CBO agreed to collect that so-called solidarity fund (Dana Solidaritas). Each member deposited monthly approx Rp. 2,000, -.

Besides, the CBOs member were also requested collectively to pay for architect and civil enginering for preparing site plan, housing design, detail design engineering and the building cost calculation. In term of CBHD-Program this architects or engineers were called Development Consultant (Konsultan Pembangunan).

Till today there is an open question about the status of this ”Konsultan Pembangunan. Normatively, ”the Development Consultant” is hopefully becoming the principle agent to support the emplementation of CBHD Projects technically (technical assistence). However, the government did not allocate special budget for the consultant. Consultant was expected to looking for funding alternatives creatively, particularly both from national and international aids.

In case of the CBHD project Pudak Payung to compesate the work of the Development Consultant, the YABAKA and the Consultant done a ”silent agreement” (gentlemen agreement). YABAKA promised that if the project runs successfully, they will receive a portion of land plot for free instead of their salary (money). Nevertheless, this gentlemen agreement was discussed without agreement from the CBO members, who has actually purchased the land parcel collectively.

In the implementation process, however, there were many complex technical difficulties: The application for the "Triguna" loan which is subsidized by the government was very difficult to be accessed. The bank

requires better securities to ensure the repayment of the loan, which could not be fullfilled by the CBO such as: the administrative rules, technical aspects, disaster precaution, creditworthiness, et cetera,. This financial problem led to conflicts of interest between all parties involved in the project: YABAKA, Development Consultant, CBO and members of the CBO.

The most difficult situation was in 2002 where a construction company reconstructe housing units on the land without agreement from the CBO's member. According to the interview with the manager of the company, construction process was conducted on behalfe of somebody, who admit as development consultant. He was promised that the CBO's members will pay the construction activities after the company has finished the construction process. Unfortunately, the manager of the construction company has believed so naively and then built up the houses on the land without corfirming these activities to the CBO's members. In fact, someone, who offered the construction project to the company, was not the development consultant. Nobody whether YABAKA, Development Consultant, CBO members known him. He was just a liar, who used the opportunity to get profit from the CBHD project.

At that time (September 2004) the road construction process was finished up to 50%. And 80 house units have been built up. Almost all CBO members were very disappointed with the activities and consequently many members complained that activities to the company through the YABAKA. They wanted to get their money back, which has been used to purchase the land.

Because of this problem the construction process had stagnated. There was not decision to solve the problem, even though YABAKA has tried to mediate meetings between CBO members and the company to find out compromise or win-win solution. Nevertheless, they remained with their own opinion. Because of the problem, the houses were idle and not inhabited. As seen in the fotos below, the built houses was getting deteriorated and broken. Finally the company agreed to pay the land from teh CBO member but just 80% of the total land price as the CBO bought up in 2000.

Figure 1. The houses built iin Pudak Payung were idle and getting deteriorated and broken

Source: Researcher (2004)

3.2 The Implementation of CBHD Project Bangetayu

The project Bangetayu is also one of CBHD project initiated by an NGO in Semarang. The NGO named PPMPS was founded in 1999.

Learning from the failure of the CBHD Project Pudak Payung, where the target group was the poor people, who work not permanently and in informal sector, PPMS tried to acsess a new target group namely the low-income civil servant in central java. PPMPS hoped that, because the participant of the project will be the low-income civil servant there will be more possibility to get support from the local government institutions.

In 1999 the NGO PPMPS tried to introduce KORPRI the CBHD-Project to help KORPRI's members to have adequate house. After some meetings held by NGO and KORPRI, finally both NGO and KORPRI wanted to build cooperation to conduct a pilot project of CBHD for approx. 300 Household. According to the researcher, the political and social situation at that moment was favorable enough to build such cooperation because wenn the project of CBO-Bangetayu was initiated (1999), Indonesia just experienced the economic crisis (in 1997-1998). This situation had encourage the student movement demanding the new era called ”reformation” with more democratic, transparant and public accountability in all aspect of human life. At that time many people particularly government apparates admitted themselfes as ”reformer” or ”reformation proponent”. Its circumstance has, according to me, certainly effected the decision of the KORPRI to support i CBHD-program proposed by the NGO.

In contrast to the CBHD project Pudak Payung, the CBHD project Bangetayu started with the process of partnership building between the NGO PPMPS and the KORPRI institution, in which the NGO has been able to anticipate many issues in the beginning of the program. The whole expenditures of the project that will be financed by the prospective participant of the program was pre-financed by the KORPRI Institution, including payment for the NGO as the development consultant, which responsible to supervise the whole CBHD process from the beginning to the end.

Through professional supervision of the NGO, all requirements asked by the Bank can be completed and thank the solid partnership between the NGO, Participant and KORPRI Institution, there were no significant problem faced to ensuring the Bank Tabungan Negara to approve the TRIGUNA Kredit for the CBHD project Bangetayu.

Beside the participant of the CBHD project Bangetayu were the civil servant, strong political support from the KORPRI institution has a significant contribution to trust Bank to financing the project (CBHD project Bangetayu). In 2000 the TRIGUNA loan was approved to finance the project.

Additionally, KORPRI institution had in fact already serviced land plot (Kapling Siap Bangun) which was for long time idle. The CBHD project was the opportunity to utilize such the idle serviced land plot. The availabilty of this serviced land plot had also added the trust of the Bank. KORPRI offered the land to the respective participant. The prices of the land plot were differently, depending on the type of the plot (see table 1). Because many participants can not pay the land directly, the KORPRI intitution give the opportunity to the participantsto pay in installment up to 10 months.

The total size of the land is 118.721 square meters (12 ha). The plots have 2 different dimensions (120 square meters and 160 square meters). The land lies in the village of Bangetayu Wetan, in the sub disdrict Genuk, in Semarang. The street and electricity supply network in 1999 were available quite good in the surroundings of the location, but up to 2003 no water pipe existed. There was only well in every house building. Public transport (bus) functioned on the main street very well. From the bus halte to the location can be reached in approx. 10 minutes on foot.

Table 1. The prices and types of the land plot offered in CBHD project Bangetayu

NO	Width of the street in front of the plot	Prices per square meter	Supporting Utility				
			Street	Drainage	Electricity	Water	Landscape
1	10 m	Rp 48.500,-/m2	Asphalt 5 m	MD 100	PLN	Wells and Pump	Palm and angsana
2	8 m	Rp 39.500,-/m2	Asphalt 4 m	MD 40	PLN	Wells and Pump	Angsana
3	6 m	Rp 30.500,-/m2	Paving 3 m	U 30	PLN	Wells and Pump	Angsana

Source: Keputusan DPU CK Propinsi Jawa Tengah

Another support of the CBHD project was the avalilability of Bapertarum fund for civil servant. BAPERTARUM (Badan Pertimbangan Tabungan Perumahan) is an institution, which organizes the so called ”solidarity tax” from the debit of the monthly salary all civil servant in Indonesia. The money is used for supporting the low income civil servant to build the house. In CBHD project the participant used this BAPERTARUM to subsidize their budget to purchase the land offered by the KORPRI.

Similar to the CBHD project Pudak Payung, the participant in Bangetayu was also grouped into small group (Community based Organization) and the chef of the CBO were chosen democratically. After establishing CBO next step was the planning and design process. In the planning process the CBO through technical assistence from the consultant they was building collective agreement on the house design and types of house that can be choosen by the household suitable to the ability of each household.

There are 3 types of house can be choosen by the household in Bangetayu (type 21, 27 and 36). The residential buildings were built as semidetached houses (Rumah Kopel). Below the semidetached house (type 21 and 36) is shown.

Figure 2. The semidetached house (type 21 and 36) in CBHD project Bangetayu

Source: Researcher (2004)

After planning and designing process was finished, the CBO was organized to looking for and selecting the candidates of Construction Company that will build the house.

At the end of 2000 the loan was approved by the bank and then the construction process began. It is necessary to mentioned that in the CBHD project Bangetayu the repayment of the loan occurred directly through the debit of the monthly salary. Hence, the bank had trust and confidence for the guaranteed repayment of the loan. Such a confidence did not exist in CBHD-project Pudak Payung.

In 2002 the housing construction activity was finished. The houses were then handed over to the participant to inhabite. Persuaded by this success the KORPRI institution has given the order to the NGO PPMPS for the next other CBHD project in Bangetayu.

Although the circumstances were much better in this CBHD project Bangetayu than with the CBHD project Pudak Payung, nevertheless, it does not mean that the project ran without problems or challenges, e.q. in selecting the construction company. There were interest conflicts between the KORPRI employees, the development consultant, the officials and CBO members themselves. Everyone wanted to win his desired construction company to be choosen as the contractor. However, these interest conflicts could be overcome democratically and transparently by all CBO members.

4. LESSONS LEARNED FROM THE CBHD PROJECT EXPERIENCES

From this research there are some lessons, which can be learned as follows:

1. The Community Based Housing Programm, which is seen as an alternative way to “enabling market to work” in fact can not work sustainable. Such program is less compatible or not feasible economically for “the poor”. In case of CBHD project in Pudak Payung it shows a lesson that there is the “limit” of the market mechanism (market failure) in dealing with housing problem for the poor. It is quite difficult to entrust the Bank to approve the TRIGUNA Kredit for the poor because they are not bankable or they have no regular or permanent job (income) to guarantee that the loan can be repayed.
2. Another contradiction in CBHD program, where the poor hopefully can buy the land collectively, is that the poor just has the ability to purchase the land with a very low price. The land is certainly located in unfavorable location with uncomfortable access to the economic activity (work place). It is not suitable for the poor, who were very dependent to the economic based resourced, which normally located in the central bisnis areas. In this issue CBHD program should be linked to a more comprehensive planning or to an integrated delopment programs, such as linking the CBHD program with the development plan of the industrial zone, where CBHD program can contribute to support the dwelling need for the employees of the industry.
3. CBHD project should have clear guideline and organizational instructions. According to many experiences, it shows that in the implementation process the interest conflicts can be barely avoided. Therefore, the clear guideline and organizational instructions in conducting such the CBHD process is urgently required. However, the moral and social engagement of all stakeholders in the CBHD program is the prerequisite of the success of the program. The moral and social engagement was reflected on the good political will of all respective stakeholders, primarily a good political will of the government apparatus.
4. To support this CBHD program technically in the practise, the government must improve their role particularly in creating a good atmosphere for the program such as: simplify the approval processes in granting of building permission for CBHD projects. In fact, it was found that within the government institution, e.g., planning board, national land board, public work departement, etc they has not good coordination among them or they were not well informed on the CBHD program, so that the CBHD process was threated like the process implemented in the normal private building contractors with long and difficult beaurocracy etc.

5. Competent development consultants (Konsultan Pembangunan) are urgently required. They play a determining role for the successful of the CBHD project. Based on the experience in Semarang, the good competency on the technical aspect only is not enough for someone to be a development consultant. In practice, CBHD project needs much social and political engagement of the Development Consutant, so that ideally a consultant should have good leadership capacities and ability to organize the CBO and building partnership between the related stakeholders.
6. The education level of the participant is the determining factor for the participation level to the program. A relatively good one education level of the participant can encourage better participation on the decision-making processes in the project. According to this research is also to be learned that the conflict of interest reises because of the unability of the CBO to organize themself to work in a mutual helping process. This can be contraproductive and can destroy the solidarity between them.
7. By means of the CBHD program, in case on the CBHD project in Bangetayu there is a lesson learned that participative approach can ensure that all resorces available can be used for the people, who actually really need the house. Bangeyayu Project shown that actually there was serviced land plot, however, the land was idle. Without the CBHD project proposed by the NGOs nobody can ensure that such the idle serviced land plot will immediately utilized to fullfill the needs of the people, who still have no adequate house to live in. So, by means of CBHD program, the socially fair distribution of the restricted available resources is better protected. They are used for the real target groups and not to the speculation.

5. CONCLUSION

From this research conducted from 2000-2005 the researcher found that such program is less compatible or not feasible economically for “the poor”, so that the program is not sustainable. However, the program has potential to help “the low income people”, who are actually able to pay but politically discriminated.

Researcher conclude that issue of the unsustainability of the housing program in Indonesia does not only lie in the “limit” of the market mechanism (market failure), but also in the unfair accessibility for the majority of low income people to the key resources in housing development (state failure). Researcher argues that the Community Based Development Approach can help to open better access for the “real target groups” to the housing program available in Indonesia.

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The Slums at the Riverbanks and a Challange for Cultural Change

Amanda Pingkan Wulandari, M.Sc.[8]

ABSTRACT

The slums growth has become an important issue in Indonesia recently. The complexities of problems caused by slums areas are due to physical, cultural (sceptical culture behaviour) and social environment (social norms). Slum areas are mainly located at the riverbanks. These are usually poorly equipped with good quality of housing standard and sanitation, poor people use the river water for all their daily purposes. In addition, slum community also usually dispose their solid waste and wastewater directly into the river. Thus, the cultural change will have a greater impact toward physical environment.

The Municipality Government of Banjarmasin proposes ***Project of Martapura River*** that introduces the importance of urban open space at the riverbanks. This paper describes the importance of stakeholders' roles to overcome slums at the riverbanks. On the other hand it has a significant relevance to environmental and health issues since the project would change the horizontal living culture at the riverbanks to the landed housing. Thus, the government, private sectors and community involvement becomes an important factor to make the project implementation become successful.

Keywords: cultural change, slums, stakeholders' roles, urban open space

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1. INTRODUCTION

Nowadays, a rapid growth of city development have made people realized the dynamic and potential of waterfront/riverfront area development (Suselo, 1993). In most cities, waterfront/riverfront development has been ignored (Suselo, 1993). As a result, some new development occurs beyond the river. Consequently, the river has become a dirty rear area. On the other hand, the development image of the city and the willingness to preserve culture and the historic value of the city also influence the waterfront/riverfront area development (Suselo, 1993). Historic preservation can help to stimulate waterfront revitalization, by preserving the unique character of historic urban riverfront; therefore city is able to enhance the development potential of their waterfront (Wrenn, 1983). Singapore's waterfront development can be a good experience in relation to city historic preservation that concerns the public-private partnership and community involvement (Suselo, 1993; Development Bank of Japan Report, 2000).

Indonesia is known as a country with diverse cultural, ethnic and geographic characteristics, which most of its topography consists of water area. This condition makes housing and settlement areas necessary on the water (river) and it also makes us recognize the terms of *riverfront city*, *floating housing* and *floating market*. Riverfront housing becomes a common phenomenon in most islands in Indonesia such as Sumatera, Kalimantan and Sulawesi. There are some groups of traditional community in Indonesia that living at the riverside area such as in Province of Jambi, South Sumatera, Riau, West Kalimantan, East Kalimantan and South Kalimantan (Ichsan, 1993).

Banjarmasin in South Kalimantan Province has a lot of rivers passing through the city. It has been known as a Thousand-River City for a long time because the city activities are particularly depend on the river. The specific function of the river in supporting people's live affects the city growth as a river city (Koesparmadi, 1995:18). The original community who had homogenous characteristics started to develop their traditional life, which physically influenced the settlement neighborhood characteristics. They settled in floating houses above the river, used the river as traditional transportation system, did their washing in the river and threw the garbage into the river. The uncontrolled rapid growth of the riverfront housing caused the riverfront housing layout not to be well organized (Pemerintah Kota Banjarmasin, 1994). This condition has made the slums grow at the riverbanks in many locations in the city and affect the tourism development in Banjarmasin.

To deal with the decline of the riverfront quality, the Municipality Government of Banjarmasin proposes ***Revitalization Project of Martapura River*** that introduces the importance of urban open space at the riverbanks

and slums relocation. This paper describes the importance of stakeholders' roles to overcome slums at the riverbanks.

2. SLUMS IN INDONESIA

The slum is defined as dense settlement area which is occupied with more than 500 people per Ha and whose residents have low income as well as social condition. In addition, it has a number of houses and infrastructures that illegally built in nation land or another person and do not fulfil the technical and healthy requirements. These characteristics are shown by the non permanent construction, bad ventilation and bad sanitation, and unwell arranged.

Nowadays, the number of slums in Indonesia has achieved about 47,393 hectare which settled by 17.2 million people that located in cities (about 10,000 locations) especially in metropolitan cities with the number of bad housing condition about 14.5 million houses (Suara Merdeka, 2004). In order to overcome the slums problems, The Indonesian Government has put the target to manage and reduce the number of slums by 2% per year. Meanwhile, The United Nation has put the target that in 2015, the number of slums is only left 50%.

The slums condition, generally, is messy and unwell arranged with non permanent construction and have no planning. Low income housing is always inadequate, dangerous, overcrowded, insecure and typically poorly located (Setijanti, 2005). Undoubtedly it has an unacceptable appearance, lack of hygienic amenities and poor of design (Slaev, 2007). In addition, the settlement has lack of infrastructures such as sanitation, sewerage, electricity system and the environment is prone to disease. Furthemore, the lack of social facilities also becomes a characteristic of slums such as the lack number of schools, worship places, and health centres. Afterwards, the residents' economic condition is mostly temporary job; work in informal sector, low of education (Komarudin, 1997).

After all, the quality of housing has a major impact on health (Acheson, 1991). Mueller (2007) described that public health researchers have documented many connections between conditions in low socioeconomic status neighbourhoods and various health concerns. According to Easterlow (2000), people who occupy the cheapest housing usually live in the poorer parts of the housing stock in the worst environmental conditions. The poor housing is widely associated with poor health. By all means, the differences in the quality, character and accessibility of the housing stock have a direct and indirect effect on the health of households, which in turn has a bearing on the position of households in the wider social structure (Easterlow, 2000).

Indeed, evidence from various studies of residents of dilapidated public housing supports the importance of both housing and neighbourhood conditions for residents' health as well as many city problems, not only from aesthetical aspect but also from environmental aspect (Mueller, 2007). The negative impacts from environmental aspect affect toward natural resources degradation that includes air, soil and water; social environment, and community health. Poor housing creates numerous health problems especially in children which has long lasting effects. Living in a substandard dwelling represents an independent and added source of stress to the lives of people with lower incomes (Kearns and Smith 1993 in Mueller, 2007). A particularly significant factor in housing-related stress is overcrowding (Mueller, 2007). When families do not have sufficient space, activities in the home become significantly constrained. According to Mueller (2007), as a result it is found that crowding has significant psychological impacts, especially on families with children.

All the problems above are caused by the lack of health infrastructures and sanitation system. The term sanitation means provision of accessible safe drinking water, water for washing and bathing and toilet accommodation (Acheson, 1991). When there is excessive pressure on the existing sanitary facilities, many people dispose their solid waste and wastewater from kitchen as well as faecal directly to the river or stream. Hence, childhood diarrhoea and other infectious diseases are common. Further it will cause river water quality degradation. Moreover, another impact of the slums density is air quality degradation. It is caused by the temporary construction and buildings density as well as bad ventilation which leads to scarcity of healthy air for its inhabitants. The buildings that established in riverbanks bring a significant impact toward the environment such as river quality degradation and esthetical impact. The environmental degradation can be indicated from floods that happened especially in rainy season and the bad quality of groundwater and wells condition in surrounding river so that it cannot be used for daily activities. Besides, the other impacts of slum settlements growth in riverbanks caused the decreasing of conservation area and drainage clogging that functioned for flowing rainfall. Another impact that is caused by slums growth is the lack of green space which necessary for buffer area in the city.

In Banjarmasin, the slums grow in Martapura River that has been a strategic land and cheap for economy activity as well as a place for living. It forms a unique local culture – kampong communities - on the river. Clark (1996 quoted by Setijanti, 2005) indicates that the specific low-income settlements form of Indonesia, the *kampong* communities, are blended communities resulting from an urbanization process, but retaining strong characteristics of rural community. According to Silas (1999 in Setijanti, 2005) *kampong* is a nurturing place for cultural sustenance. Indeed, Hardoy and Satterhwaite (1995 in Setijanti, 2005) insisted that the growth of illegal settlements can be viewed not as the growth of the slums, but as the

development of cities in a way more appropriate to local culture, climate and conditions than that advocated by the government.

Figure 1. Slums Condition at the Riverbanks

2.1 BEST PRACTICES DEALING WITH SLUMS

Slaev (2007) said that while specific national or local conditions should be taken into account, international experiences should be considered in order to avoid repeating mistakes or following practices already identified as inefficient. Slaev (2007) explained that there were 3 international experiences , which are relevant to housing provision for the poor dealing with squatters and slums.

Firstly, the respective approach in 1950's and 1960's that was formulated as "slums eradication". It was based on the notion that the squatter settlement should be demolished because they could not be improved. ***Second***,ly site and services approach by UNCHS and the World Bank that was prevailed in 1970's. It's essence was that the central and local governments had to provide the land and infrastructure with the housing developed by the households themselves (Keivani & Werna, 2001 in Slaev, 2007). However, there were problems with access, due to the peripheral locations of the new settlements, and speculation with the land adjacent to the new settlements (Slaev, 2007).

Generally the impacts on relocation is negatively depicted in terms of lack of compensation and assistance, the pressure and stress of relocation accompanied by the loss of social network and increased housing cost (Fuller, 1995). In addition, displaced families are often re-housed in substandard conditions thereby perpetuating social and economic problems (Fuller, 1995). Satisfaction with relocation has been linked to improved housing quality, residential setting, a sense of home and belonging,

availability of social support network, and attitude and feelings about the move (Fuller, 1995). According to Fuller, tenants would be more satisfied with their living if they were relocated to a better house, in a better location, with better access to services and closer to family, friends and workplace. In addition, Fuller said that it would be positively associated with the amount of information they received (Fuller, 1995). Due to information provision, personalized contact also appears to be a more effective means of providing information rather than through public meetings and newsletters (Fuller, 1995). Contact needs to be maintained following relocation to monitor tenants' adjustment to their new living situation and counselling provided if necessary. In particular, being able to offer tenants a better housing quality is likely to be the strongest inducement for getting them to agree to move (Fuller, 1995).

That introduced the ***third*** approach, policy of enablement in 1980's that did not aim at new housing provision, but more on providing conditions, facilities, organizational and financial instruments for the poor to be able to solve their housing problems on their own (Slaev, 2007). This is how this policy formulated "squatter and slum upgrade" aimed at measures to improve the living conditions in existing slums by introducing urban services and social amenities, building infrastructure, better street and social spaces design, general upgrade of the built environment (Slaev, 2007).

3. THE ESSENTIAL OF URBAN OPEN SPACE

Urban open space of which people are not necessarily aware is of two kinds: open space which does urban works – protects water supply and prevents flood by soaking up runoff, and open space on which helps shape the development pattern – as space between buildings or communities, as space which channels development (Tankel, 1963). The urban open space can be seen as area, path (roads, railways, rivers), even city nodes that has open base uses for the public. It functions to guarantee oxygen supply, promote healthy climate and city amenity, support educational and recreational facilities, preserve sanitation need for the city life.

In terms of planning issues, the urban space existence still be a common problem for the stakeholders, such as inconsistency of policy implementation, the low level of its maintenance, conflict of interest among the development stakeholders, community unawareness to the essential of urban open space for their quality of life, the low level of institutional framework and the wrong treatment to the urban open space (river) as a city dump. Thus, the National Government of Indonesia establish some development policies due to the essential of urban open space that can be seen in UU No.26/2007 on Spatial Planning and Permendagri No.1/2007 on Urban Open Space Planning (Directorate of Environment and Building Planning, Department of Public Works).

4. BANJARMASIN AS A THOUSAND-RIVER CITY

In discussing riverfront redevelopment, it is necessary to describe the existing condition of the city in relation to the role that riverfront housing helps in forming the image of the city as a river city. Banjarmasin has a lot of rivers passing through the city. It has been known as a thousand-river city for a long time because the city activities particularly depend on the river. Most of the village names are also taken from the rivers' names. Furthermore people recognize Banjarmasin as a city, which never dies from its river life. The length of the rivers varies from 5 km to 10 km, and the width of the rivers varies from 5 m to 60 m.

Banjarmasin is a capital city of South Kalimantan Province. It grew from a small village, which was called Banjarmasih, before it grew as the North Kuin Village. On September 24th, 1526 Banjarmasih City was established and it started to grow as a centre of Banjar Kingdom. It is bounded by Pandai River on the north side, the Pangeran River and Jagabaya River on the east side, the Kuin River on the south side and the Barito River on the west side. Presently, we can still see the mosque and cemetery of Sultan Suriansyah as the remains of Banjar Kingdom.

The first riverfront area existed when the ethnic community came and settled on the river near the North Kuin Delta. Gradually it grew into a small village, which was called North Kuin Village. The original community started to develop their traditional life, which physically influenced the settlement neighbourhood characteristics.

The area of Banjarmasin City is 7200 Ha. In 2006 its inhabitants are 602.725 persons that are distributed in 5 districts of South Banjar, North Banjar, East Banjar, North Banjar dan the City Centre Area.

5. REVITALIZATION PROJECT OF MARTAPURA RIVER

The Revitalization Project of Martapura River is located along Kapten Pierre Tendean St for 1.3 km and divided into 4 zones:

- Pasar Lama Bridge – Merdeka Bridge
- Merdeka Bridge – Dewi Bridge
- Dewi Bridge – Antasari Bridge
- Antasari Bridge – RK Ilir Bridge.

In The Banjarmasin Spatial Planning it is identified that Banjarmasin still has a problem of lack of urban open space for recreation area. Kapten Pierre Tendean St is designed as an urban open space to fulfil the community need. It is planned to increased tourism dimension for city development. The project is set to manifest the Banjarmasin Spatial Planning. As

consequences, the slums at the riverbanks have to demolish and The Municipality Government of Banjarmasin proposes new settlement relocation for the community.

The project aims to provide open space for the city activities, educational supporting facilities, recreation area, improve environment and river quality, enhance riverfront area as tourism development asset, increase economic development and strengthen the riverbank area. The project also set to deal with some spatial planning issues such as the dependency to the city centre area, image of the city improvement, unstructured riverfront area and slums growth, and the low level of periphery land use. Some approaches are taken into account due to the project concept in terms of historical, cultural, environmental and hydrological issues, public open space, riverwalk and pedestrian ways for people, wide accessibility to the river and place making for many people activities.

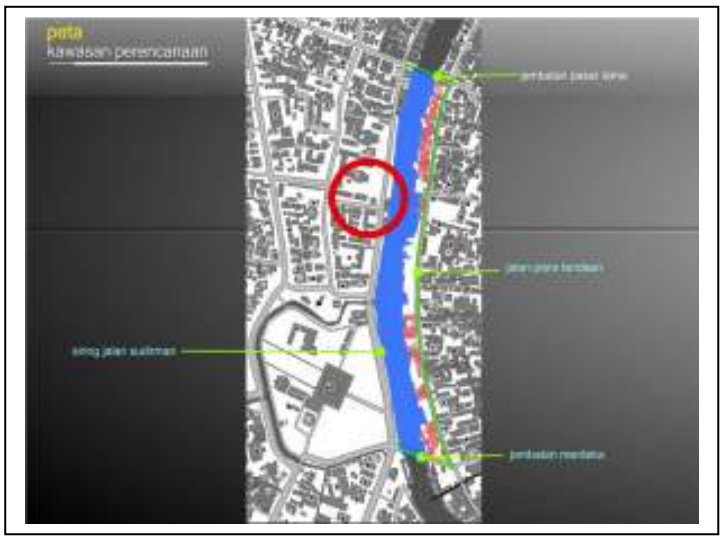

Figure 2. Project Location

5.1 Integrated Dimension in Revitalization

All over the area there is such an older core and an historic city centre representing a unique historical link with the past. A physical manifestation of the social and cultural traditions, have been developed to give the modern city and society for a great meaning and character. Therefore, some efforts to preserve the historic area of the city is still continue to be done. During the United Nation Summit, Habitat II, the conservation and rehabilitation of

historical and cultural heritage was mentioned as one of the important ways to raise quality of city life (IHS News, 1997).

According to Steinberg (1996), the focus of revitalization and rehabilitation of historic centre has to be on whole areas, not just individual buildings. It emphasizes the importance of a comprehensive and integrated approach to planning for older area and especially the need to consider complete conservation/rehabilitation areas, which links the economic, social/cultural, physical and institutional dimensions, shown in Figure 8.3. Physical renovation combined with economic revitalization and social inclusion becomes key elements of strategies and plans for urban development (van Hoek, 2000). There is a need to address those different dimensions in an integrated way. Consequently, revitalization strategies should promote integral approach.

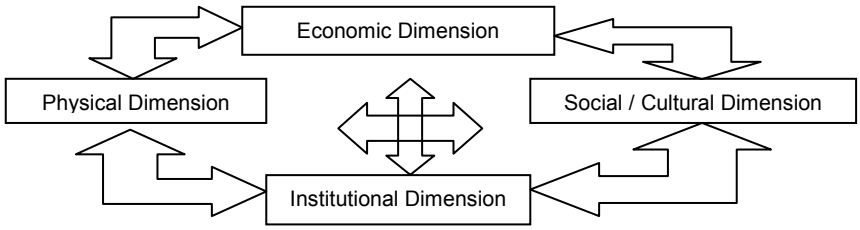

Figure 3. Integrated Dimensions in Revitalization

In order to stimulate the economic development, the revitalization needs to introduce alternative financial scheme. The Revitalization Project of Martapura River has tried to establish strategic financial scheme from The National Government, The Province Government of South Kalimantan, The Municipality Government of Banjarmasin, private sectors and community. A strong and planned financial strategy will support the clear responsibility of project managers (Winarso, 1999). Thus, The Municipality Government of Banjarmasin has to try the possibility to conduct public-private co-operation/partnership to raise more funds. Revitalization should be completed with income generation program. Regarding The Revitalization Project of Martapura River, it is reflected from the establishment of tourism development that combining historical preservation and place making.

Regarding the physical dimension, the riverfront revitalization should be based on the developmental conservation, which concern on old built environmental preservation while creating opportunity for modernizing the physical infrastructure and infrastructure upgrading that can lead to private investment. It can be determined from the preservation of historic buildings as a whole of historic city area, open space design, and traditional

architecture ornament which was applied to the design of street lights, piers, tower and musholla.

Revitalization is essentially a process resulting in the changes of living condition of the citizens. It is a big challenge since most of the local community still depend on their life on the culture of river life.,. In terms of cultural change of life due to health issue, The Municipality Government of Banjarmasin is succeeding to convince local community to relocate them to landed housing by agreed compensation.

The revitalization needs for integrated institutional framework, which should be supported by policy level and able to be represent and co-ordinate all actors as well as increase synergy to the process. The institutional framework has important role in ensuring inter-agency co-operation to implement the project (Winarso 1999). Therefore, a well-organized institutional is needed to achieve sound commitment and good coordination among development stakeholders in terms of public sector, private sector and community involvement. One of the objectives of the Revitalization Project of Martapura River is to formulate a solid institutional framework, which involves government authorities, CBOs and private sectors. Recently, the institutional framework involves the National Government, Province Government of South Kalimantan as facilitator, The Municipality Government of Banjarmasin, professional experts in architecture, civil engineering, planning, cultural, and tourism disciplines, university research institution, managers of historical buildings, and local community represented by their neighbourhood leader. The revitalization should be combined with the creativity and innovation of planning approach that is manifested in the tourism development.

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2 - 5

Slum Upgrading through Community Participation

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ABSTRACT

Along with the world's growing population, the urban slum settlement also grows. One of the reasons of the slum settlement is the poverty. There are 37 centers of slum settlements in Surabaya City which are located in 23 districts. Sukolilo District of Bulak Sub District is one of the stated areas which have a slum settlement in that place. Besides there is no overall good settlement plan to this area, the slummy areas happened because of the lack of community participation in upgrading their environment. The research is aimed to formulate the concept of community participation in upgrading their slum settlement which is suitable with the conditions in Sukolilo District of Bulak Sub District in Surabaya City.

The analysis technique used in this research is a percentage quantitative descriptive analysis, correlation and descriptive qualitative analysis with triangulation technique to determine the community participation concepts. The correlation analysis is used to see the relationship between forms, process, and the deep level of community participation with its community characteristics. The triangulation analysis used is a combination of synthesis theory, stake holder's opinions, and the people's opinion as well.

Keywords: Community participation, environment upgrading, slum upgrading

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1. INTRODUCTION

1.1 Background of the Study

The problems of slum exist not only in Indonesia, but also in almost developed countries in Asia and Africa. The city's slum exists because of the abundant urbanization, the growing population, globalization, poverty and inability of the city's government in managing the growth and administering an adequate city services (Tannerfeldt, 2006). Nowadays, there are 17 millions of people who live in the city of Indonesia live below the poverty line who reside the slum 40 thousand hectare in 10 thousand locations (www.pu.go.id).

Slum could be decreased by government, community, or private sectors. Government have restricted ability to control it. Government reduced the slums of up to 2875 ha in 2004 through the central government budget and local government budget. So that to realize the "City Without Slums" in 2010, the Indonesian government must be able to handle the settlement area slums of 4739 ha/year. Besides, prevention efforts must also be the development and expansion of the slums area (www.nussp.com).

The criteria of a settlement which is considered as a slum is a physical factor, economic factor, and factor of the community who live in the slum area (Litbang PU, 2004). One of the weaknesses of the slum's upgrading program which related to the factor of the inhabitant community is the active participation of the community and its related elements. This is related with the ability in understanding the community's will by themselves, the unawareness of the community to their environment), and the difficulty in getting the problem-solving process in reaching the agreement (Silaban, 2003 and Dhakal, 2002).

The community who are involved in the development process is a reflection of a development strategy which oriented to the people-centred development. By the community participation, the result of the development will fit with the aspiration and the need of the community themselves. The community participation will be existed if the involved factors are people, organization, or the creditable institution, development which centred on the basic problems and will directly benefit the living welfare. The participation of community will also reinforce the community to contribute the ability and their potentials for their development program (Soekamto and friends, 2004).

Surabaya City as one of the big cities in Indonesia has a potential as a slum settlement centre. Based on the identification conducted by a team of the local neighbourhood administrative unit of Surabaya City in 2003-2013, there are 37 (thirty-seven) centres of slum settlements in Surabaya City, which located on 23 (twenty-three) districts. The big slum location part is located on the boarder of the Surabaya City, the boarder of Gresik Regency,

Sidoarjo Regency, and Madura Straits (Fact Analysis of the RTRW Surabaya 2003-2013).

One of the slummy areas in Surabaya City is located on Sukolilo District, Bulak Sub District (Fact Analysis of RTRW Surabaya 2003-2013) which has a boundary with Madura Straits. Sukolilo District is high density area and its environment is relatively disorder. One of the causes is natural growing population and uncontrolled migration results. Besides, there is no well planned environment arrangement in all places. The biggest part of the population is fishermen and sea-harvest merchants. The settlement in this area formed clusters in accordance with its environment (The Settlement and Infrastructure Department of East Java Province, 2007).

The development and upgrading program which has been and is still going on in Sukolilo District area is the upgrading and infrastructure improvement on drainages, roads, garbage, clean water, and the like. The program is called KIP-K stands for Kampung Improvement Program-K/Comprehensive) in the year of 2003, NUSSP (Neighbourhood Upgrading and Shelter Sector Program) in the year of 2007, and the program which is still in progress in the year 2008 is P2KP or Poverty Prevention Program. The implementation of this development program of improvement environment settlement stated above is hoped to involve local community participation. After the implementation of C-KIP in the year of 2003, the wide of the slum settlement in Sukolilo District is 25,47 hectare or 30% of the total wide of its areas (The Settlement and Infrastructure Department of East Java Province,2007).

In line with the illustration above, it can be seen the importance of community participation in upgrading their environment to decrease the wide spread of the city slum significantly. The community participation concept is a crucial thing to be analyzed, mainly the analysis of the form, process, and how far the community participation involved in accordance with its local community conditions. It is hoped that the resulted concept shall be able to be the basic for the arrangement of the slum area in Sukolilo District Bulak Sub District of Surabaya City in the future.

1.2 Research Problem

Reduction of settlement area in the slums district Sukolilo can not only rely on government assistance. This is due to the limited government funds in the settlement area slums. Community participation in slum upgrading will accelerate the reduction of slum. Besides, the community participation also maintains environmental settlement does not become dirty. From the description on the research question can be formulated as follows:

- How does the concept of participation in community improvement district in the area Sukolilo slums?

1.3 Aim and Objective of the Research

The purpose of the research is to analyze the community participation in the slum upgrading in Sukolilo District. The objective of the research in order to get the aim stated above are:

1. To identify the community characteristic of Sukolilo district
2. To identify the community participation characteristic in the slum upgrading in Sukolilo District
3. To identify the constraints in carrying the community participation in the slum upgrading in Sukolilo District.
4. To explore the desired participation of the community in the slum upgrading in Sukolilo District.

1.4 Scope

This research analyzed the community participation in upgrading the slum settlement areas in Sukolilo District. So, the scope which be discussed are as follow:

1. The Scope area,
   is the administrative area of Sukolilo District Bulak Sub District of Surabaya City. The wide of Sukolilo District is 0,79 hectare, consisted of 3 RW and 10 RT (Neighborhood Administrative Associations). Topographically belonged to mainland and beach areas.
2. Substantial Scope.
   The substantial scope discussed in this research is the form of the community participation and the deep surface level of community participation in the slum upgrading in Sukolilo District Bulak Sub District of Surabaya City.

2. REVIEW OF RELATED LITERATURE

2.1 Definition and Criteria of Slum Settlement

The criteria of the slum according to Alit (2005) consist of physical, economics and social aspects. **Physical** aspect is a condition in which the condition of the settlement is occasionally troubled by the floods and burns, improper settlement infrastructure, environment sanitation, clean water source. **Economic** aspect is a condition belongs to the low-income community, and **social** aspect is seen on the low educational background of the society.

As Litbang PU (2004) stated that the proper settlement is consisted of proper living, proper business, and proper improvement. The proper **living** is

achievement of physical requirements, health, and decent as a group of socialized people. Proper **business** is the fulfilment of the conducive environment of social and its community economics. And proper **improvement** is the fulfilment of environment condition to support the improvement of its social welfare. Both Alit (2005) and Litbang PU (2004) stated that a settlement can be regarded as a proper or slum is depending on the fulfilment on physical facilities of the settlement and the continuity of the economic conditions and local social community.

2.2 View of Community Participation

Mikkelsen (2005) stated that community participation is the aim of the democracy process from the community and managed by the community itself. Adi (2008) stated that community participation is the involvement of the community in the process of the identification of the problem and the potential that exist from the community, the choice and decision making of the solution alternatives to solve the problems, efforts to solve the problems and the community involvement in evaluating the change process. The involvement of the community in various stages of the change can make the community be more powerful and even have prevention in facing the changes.

Based on the above explanations, the community participation in this research can be defined as the involvement of the community willingness in knowing the potential and problem on themselves and participating on the process of upgrading the surrounding settlement. The participation should base on the willingness or their own-wishes.

The community participation level showed how far the social activities in the process of the development. Arstein (1969) stated that level of the deep of the ideal community participation will succeed community efficiency. This matter will be achieved if there is a chance and inhabitant's ability in controlling the development programs. The level of community participations are divided into 3 (three) stages; non-participation/passive participatory, tokenism, and active participatory. Non-participation or passive participatory is a condition in which the community is not involved or be involved at all in a process of development. The tokenism is a condition in which the community is as to be seen as if they are participated. But if it is seriously focused it showed that the community is not involved or participated in the development process. In the active participatory level or citizen power, the community has become the subject of the development process. The communities have understood and really comprehend on their self conditions and needs.

The form of community participation is used for knowing on how the community participation be carried out and shows how the community participates in slum upgrading. According to Chambers (2002, in Mikkelsen

2005) the form of community participation to be seen as a trick as if they are participated, or just gathering the power in the participation. Or can be in the stage of efficiency. The form can be seen on (1) the way the community participates, (2) the tool to be used by the community to participate, (3) the real form of the participation mentioned. The achievement of community participation indicator is used to determine the achievement level of community participation process. Marschal (1998) stated that the community participation achievement in the slum upgrading depend on: (1) how big is the represented ones, (2) how far is the effectiveness of interaction among the society members, (3) what is the role of the facilitator in the process, and (4) how far is the society can explore their need so that it really match with the need they really want.

2.3 Community Participation in Upgrading Settlement Area

In the community participation concept, the society should become the subject of the development to maintain the continuity its development process. Community participation is a process to increase the living standard of its society themselves. So, in the slum upgrading, the active participation from the society is needed so that the process will be in progress. The community participation is also one of the effective ways to increase the society living standard in the slum by themselves. The society is supposed to participate in the process of planning, carrying, and supervising. Besides that, participation and involvement from the community is needed in the process of decision making in the initial planning stage, carrying, and supervising as well.

3. RESEARCH METHODOLOGY

The aim of the research is to analyze community participation in the slum upgrading in Sukolilo Districk Bulak Sub District of Surabaya City. Based on the empiric fact on the field, this research is using rationalistic research. This research began with analyzing, and comprehending on the view of slum, community participation concept, community participation in the slum upgrading, and the society development to enhance community participation. The analysis and the comprehension are used as fundamental theory to reach the concept of community participation improvement in the slum upgrading which is suitable with the field research. Moreover, the concept will be analyzed by using the sensual empiric fact (which can be caught by the five senses), ethical empiric (the norm which carried out in the society) and logical empiric which can be achieved through the secondary data.

The kind of the research used in this study is the combination between quantitative and descriptive qualitative research. The quantitative analysis is

used to conduct the counting of the received data from the field. Whereas the descriptive qualitative analysis is used to describe and to interpret the quantitative analysis results so that the analysis result is acquired suitable with the aim and the objective of the research.

4. ANALYSIS AND DISCUSSION

4.1 General Condition Sukolilo Distrrict Bulak Sub District of Surabaya City

Sukolilo District has a boarder on Madura straits. The district has a specific location characteristic among others are seaside place and fishermen settlement who tend to live in a slum, difficult to reach an access basic settlement infrastructure, unregulated sanitation with lack of sanitation infrastructure of integrated environment, and became final destination of the city's drainage. The area of Sukolilo District consisted of 3 RW (Administrative Neighborhood Association). The association is formed automatically caused by settlement's cluster. Based on the Report of Study Formation of the Slum Area of Surabaya City and Its Surrounding, the area of Sukolilo District which is relatively categorized as a slum is located on RW II centered on RT 1 up RT 5.

Based on the field study, in general the settlement's condition in Sukolilo District are consisted of permanent housing, however, the settlement environment looks slum since there is lack of proper intention from its inhabitants towards its environment. The biggest part of the Sukolilo District inhabitants are migrants from the rural places and their main occupation is as a fishermen of people shipping. The migrants lived with their family so that their migration gradually had a significant effect either negative or the positive effect as well.

The additional citizens as migrants along with springing lodging houses are not accompanied by a proper infrastructure. The existed settlement did not have a proper drainage system. The water flowed from the drainage to the ditch which are made improperly from the digging land and made the drainage's water stuck in this place so that it looks like there is no proper treatment with a view of the household drainage's waste water which overflowed up to the terrace of the lodging houses around it. Since lack of proper drainage system, this area almost always has a flooding in the rainy season.

The study area's settlement occupies the places of more or less 30% of all the administrative areas of Sukolilo District. The rest land is reclamation areas which are used for Kenjeran beach resort place. The environment area formed 3 clusters in which administratively are divided into 3 RWs. The growing settlement happened incrementally and grew naturally without initial

control and planning. Thus, the settlement grew and developed imbalanced. The following will describe the settlement's condition of the research study area based on the accessibility condition, building density, communal toilet, garbage storage, housing used a production place, and the unused land.

4.2 The Population Characteristic of Sukolilo District

Almost two-third of the Sukolio District population earned for their living from the sea products among others as a fisherman, fishermen's labor, and sea product and its variance businessmen. The business is in the form of a sea-product supplier to the company, sea-product industry, and sea product merchants. The earning businesses are from the catching fish, sea plants or animal, and various kinds of shells. Some biggest part of the sea products were reprocessed as a processed food or snacks and handicrafts, which were sold along the street of Sukolilo and the nearest local seashore resort known as Kenjeran Park. Two years before, fishermen only had abundant catching fish only in a certain season, that is in the month of September up to April, while in the other months the catching were very low, even almost nothing. However, ever since Porong's hot mud were flowed to the Porong's river, this killed the sea inhabitants in the place where the fishermen catch the fish indirectly. The catching fishes on the month of November, 2008 (when the survey were being conducted), were only of 10% from the usual catching. While one-third of Sukolilo's population have various kinds of jobs among others are house servants to TNI AL complex which has 1 km distance, brick layer labourers, store clerks, and private institution and teachers.

Based on the result's field survey, it showed that the biggest part of the community houses in Sukolilo District are privately owned (77% of the population). Whereas the rest were living on their parents' home (3%), residents from other places who lease the house from the local inhabitans (13%), and there were people who only lease the empty land and built the house by themselves (7%). This indicated that the community of Sukolilo District are the local inhabitants of the research areas.

4.3 Community Participation Characteristic in the Slum Upgrading in Sukolilo District

Characteristic of community participation in the slum upgrading in Sukolilo District is divided into 2 (two), these are based on their kind of occupation and the status where they lived.

The fishermen and labours in Sukolilo District tend to have participation labour characteristic and a low depth on the initial implementation stage and after the implementation one. Private businessmen and teachers tend to

have labour participation characteristic forms. The depths on the implementation stage tend to be low and average, and tend to be low on the stage of the implementation. Whereas the clerks tend to have labour participation and non-participation. The depths on the implementation stage tend to be low and high, and tend to low and average on the implementation stage.

Sukolilo District's community who resided on their own house and rent the land and the house tend to have labour participation characteristic and the depths are relatively low. The residents who just stay tend to have labour participation characteristic forms. The depths of the residents who just stay were average and high on the implementation stage and tend to be low and average after the implementation stage.

4.4 Community Participation Implementation Constraints

The community participation implementation constraints in the slum upgrading in Sukolilo District are from factors of (1) economics, (2) social, (3) education, and (4) commitment implementation. The society economic conditions influenced the awareness to the surrounding settlement environment. The lower the economic level is, the fewer the awareness of the community toward its surrounding environment since most of the time were being used for earning the living.

The social factors are derived from the background and the customs and traditions. The social factor influenced the way the family thinks, or the society in facing the surrounding environment. The condition of Sukolilo District society is influenced by the condition of their kinds of occupation that is society who work in the land and the sea. This matter is caused by the different working hours between both of them so that it is difficult to unite if there is a problem which has to be done together. Community who work in the land area (some of them are laborers, private businessmen, employees and teachers) have the working hour from morning to afternoon. Whereas those who work at the sea (fishermen, fishermen's labors, and some are private businessmen) work from the evening until morning while the day time is used for taking a rest. This matter made the fishermen community seldom follow the local activities in the day and night time.

The education factors are derived from the formal and informal education which have been accepted by the community of Sukolilo Distric. The lower the educational background is the less participation in the development process. Besides, the educational background also influenced how a person or society in realizing the organized plan to realize the commitment they have been planned before. The higher the educational background is the higher the person or society in realizing their wishes.

Sukolilo District's community who have a job as fishermen and labor tend to consider that social factor is a constraint in implement community participation in the slum upgrading. The private businessmen and the employees tend to consider the social factors and the educational background are the constraints. Whereas teachers think that the constraints of community participation is the economic and social factors.

The community of Sukolilo District who resides in their own and rented house tend to consider that the constraint of community participation is the social factor. The inhabitants who reside at the rented house tend to consider that the economic factor, social, commitment realization, and educational background are the constraints. Whereas the inhabitants who just stay think that the social factor and education are the constraints in community participation.

4.5 The Preferred Characteristic of Participation by the Community in the Slum Upgrading in Sukolilo District

The fishermen in Sukolilo District tend to prefer a low deep participation and the party who decides are the community themselves. The prefered form of the participation from the fishermen of Sukolilo District in the planning is non-participation. In the stage of implementation, the wanted are in the combined participation form of labor, money, and so on. Whereas on the stage after the implementation, the labors want labor participation form.

As the fishermen, the laborers in Sukolilo District also tend to unwilling to be participated in the planning stage. While on the implementation stage, the laborers tend to prefered labor participation form and money. Whereas after the implementation stage, the form of labor participation are the prefered form from the laborers.

Private businessmen and teachers in Sukolilo District also tend to prefered not to participate on the planning stage. While on the implementation stage and after implementation, tend to prefered the labor participation form. The businessmen and teachers tend to prefered low deep participation on the planning and after the implementation, and tend to have average deep participation on the implementation stage. Teachers tend to prefered the society or do not know who decides in community participation in all stages. Whereas private businessmen tend to wish the party who decides is the government on the planning stage, collaboration of government and the community on the stage of implementation and after implementation.

The employees in Sukolilo District tend to preferred labor participation form and non-participation on the stage of planning and after the implementation. On the implementation stage, employees tend to wish combined participation forms of labour, money and so on. The employees

tend to prefer low deep participation on the planning stage and after implementation stage, and low and high deep participation on the implementation stage. As the party who decides in community participation, the employees tend to prefer the collaboration between the government and the community in all stages.

Inhabitants who lived in rented house tend to prefer not to participate on the planning stage and labour participation form. On the implementation stage tend to prefer the combined participation of labour, money and so on, and the deep participation is average. Besides that they tend to prefer the collaboration between the government and the community as the party who decides in the participation are the community themselves in all stages.

Whereas Sukolilo District's community who just stay in the lodging house tend to wish not to participate and labour participation form on the planning stage. On the implementation stage, tend to prefer combined participation form of labour, money, and so on and the deep participation tend to be low and high. The preferred party as the decision maker by the community who just stay in one's house is the combination between the government and the community in all stages.

5. CONCLUSSION

1. The biggest part of Sukolilo District Bulak Sub District of Surabaya City community depend their living on sea product economics.
2. The biggest part of community participation characteristic forms in Sukolilo District labor in the form of voluntary labor service.
3. The biggest part of the deep characteristic of community participation of Sukolilo District is low caused by lack of self initiative in the community.
4. The constraints of the realization of community participation are economic factor, social, education, and commitment realization
5. Sukolilo District societies tend to prefer not to participate on the planning on the implementation stage, tend to prefer to participate, whereas after the implementation stage the societies want to collaborate with the government to handle slum condition.

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2 - 6

Noise Hazard in Residential Slum Area Near Airport
Case Study : Slum Housing In Semarang

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ABSTRACT

A number of researchers have learned the effect of some design parameters in building in the tropical humid region on making the air flow to the building as efforts to improve thermal comfort and saving energy in buildings. If there were a sufficient air flow to the building, the condition will be much comfort to live in without using the system of active – air condition. Unfortunately air flow that moves inside buildings not only gives a comfort conditions but also bring poor air pollution. A terrible air pollution is noise. As the result of our previous research, we found that layering the building façade by absorber material can reduce intensity level of sound received in the building.

In term of reducing noise, housing's facade near the airport should be designed appropriately for the efforts to reduce noise disturbances emitted by airport's activities, such as landing and take off. This research will find the way, how building orientation pattern and façade design have an important role to reduce aircraft noise.

Slum housings have to get many ways as efforts in reducing noise hazards. The condition become worse and worse if the condition still go on forever. Further more, if the airport become an international standardize, there will be much more flights and take off or landing schedules. The condition which is so poor because of environment's degradation will be much poorer because of noise hazards. Up grading the slum area is the important solution, and there are many acts to make the condition much better and healthier for the society. Innovations of building construction in reducing noise are needed for slum housings in theme of making sustainable environment.

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1. INTRODUCTION

Cakrawala and Graha Padma Residential are located in Semarang City, this residential located close to Ahmad Yani Airport, so that it gets impacts from airport activities.

Not long ago, area around Ahmad Yani Airport Semarang, people get restless because of the airport developed as international airport. As the impact, the runways extending toward surrounding area as the main reason for people around airport.

Airplane increment, and flight frequency runways extension increase area's noises intensity, for residential, houses and others facilities function, which existed around airport. (Suara merdeka 14 October 2005).

Architectural phenomenon, which occurred in field shows that, this noises issue has not get serious consideration, so that on buildings which is silent factors or free-comfortable requirements from noises disturbance in building design has not been considered in detail. Noises disturbance sourced from many kinds of sources, as following:

- Noises of traffic and transportation (car, truck, motorcycle, train and airplane).
- Industrial noises.
- Noises, which came from human activities (modern tools)

According to Public Work Minister Rules No 06/PRT/M/2007, dates on 16 March Year 2007 due to Public Manual of Rencana Tata Bangunan dan Lingkungan. Building Design is product of building implementation also its environments as land use, includes many aspects such as Citra/character of environment physically, magnitude, and configuration from elements: lot / parcel of land, also building floor height and elevation, which able to create and define accommodate city's space quality to existed activities, especially

that run in public spaces. Building Arrangement is planning system as a part of building development process and it's environment, includes infrastructure in artificial environment, both in urban and rural area, according to location appropriation, which arranged by landscape rules in RTRW Regency/City, and detail plan.
While, the usage of building arrangement related with minister rules, are:

1. Create an area that suitable with morphology of the area development, also its harmony and integrity configuration adjustment for block, lot and building.
2. To improve city space quality that is safe, comfortable, healthy, interesting, ecologically, and accommodates many activities.
3. Optimize the suitability among external space of building and public environment so that creates interactive spaces between buildings.
4. Create images and special character from planned sub area.
5. Reach the balance, relationship and integration of building arrangement elements, in order to obtain performance, function, aesthetic, social, between planning area and external land.
6. To obtain environments, that responds to economic demand and creates social-integration in space.

2. RESEARCH PROBLEM FORMULATION

How far did the effectiveness of orientation and building configuration to runaways in acoustic controlling of Residential in reducing noises from Ahmad Yani Airport Area.

2.1 RESEARCH GOAL

The observation aims to analyze the influence of orientation and building configuration in order to reduce noises from airport area in residential area, especially Cakrawala and Graha Padma

2.2 RESEARCH VARIABLE

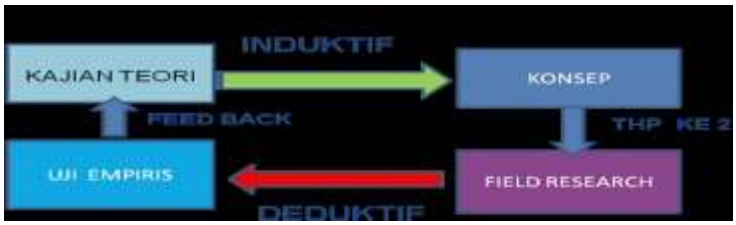
Based on phenomenon of above noises in tropical city, along with Dissertation proposal titled:" The Impact of Building Orientation and Façade Design on Residential Area around Airport in Reducing Noises", therefore required research variable, first. According to Sarwono, Jonathan, 2006, there are variables in the research, that is:

1. Independent Variable is stimulus variable or variable that influence other variable. Independent variable is a measured variable, manipulated or selected by researcher to determine the relationship with observed symptoms.

2. Dependent variable is variable that provide reaction/responds while connected with independent variable. Dependent variable was observed and measured variable that used to determine the impact of independent variable.
3. Moderate Variable is the secondary independent variable which wilful selected by researcher to determine the presence of impact to the relationship between first independent variable with dependent variable.
4. Control variable defined as variable which controlled by researcher to neutralize the impact. Which uncontrolled, then, that variable would influence examined symptoms.
5. Intervening variable, is hypothetical variable, means that the impact unseen, however, theoretically its impact variable relationship, it still cannot seen, manipulated and the impact should concluded from independent variable's influence and moderate variable to examined symptoms.

Based on research, which related with noises, systematically, operational variable that becomes based field activities, are following:

1 Independent variable : Building Orientation to runaway
2 Dependent variable : Acceptable noises intensity
3 Moderate variable : Noises of air transportation
4 Control variable : Distance model to runaway
5 Intervening variable : Temperature, humidity, wind speed



3. STANDARD OF BUILDING PLAN AROUND AIRPORT

According to Builder's Guide Mitigating Aircraft Noise in New Residential Construction, there are particular requirements in planning building function around airport

There would perform measurement of ORIENTATION PATTERN OF BUILDING MASS BLOCK of residential related with its position to airport runaway in its ability to REDUCE EMERGE NOISES.

By periodically measurement in two stages of measurement, that are:

- Block 4, Building Mass to test 1 Hypothesis
- Block 4, Building Mass to test 2 Hypothesis

there would obtain phenomenon in fields due to both things that interested for further research in larger research. Measurement performed by determines Research Hypothesis first along with research Title: "The Impact of Building Orientation and Façade Design on Residential Area around Airport in Reducing Noises". Due to research problems, there is needed to represent Research Hypothesis, which is determined for this further research.

Research hypothesis consists of two things that are:

1. Building Block Mass that having reduction pattern of particular noise due to its orientation toward runaway.
2. Building mass block orientation has significant influence to reduction pattern of noise.

In first stage of research that performed on CLIVIA and OXERA types, on AVONIA cluster, which have southwest and northeast orientation, obtained that Building Orientation toward northeast would be more effective to reduce noise, further finding is, CLIVIA type more significant in reducing noise than OXERA.

There are differences with the first stage of research. In this secondary research, the orders are following:

Building Mass Block 4

1. Leq measurement on 4 houses block using Sound Level meter Luthron SL-4001 for 3 unit, in the same time, while the plane take-off or Landing (measurement performed in house's platform, in the front part of main door).
2. Perform Leq reducing to STL value for each houses type (with STL that has formulated with excel program-2007)
3. Perform Leq reduing to STL value for each houses type.
4. Perform data management with table (Measurement Data, Chapter 4).

Building Mass Block 4

1. Leq measurement on 2 houses block using Sound Level meter Luthron SL-4001 for 4 unit, in the same time, the differences are stages that performed on block of 4 mass. This block of 2 mass is comparing 2 orientation to difference runaway. Each orientation consists of 2 houses. For example, 2 building mass overshadow runaway, compared with 2 houses that orientation toward runaway.
2. Measurement of STL value for each houses types that are CLIVIA and OXERA types.

3. Perform Leq reducing to STL value for each houses type (with STL that has formulated with excel program-2007)
4. Perform distance equalizing using L2 = L1 – 20log (x2/x1); with x as its distance.
5. Perform data management with table (See Measurement Data, Chapter 4).

The research tools, which used in further research, are:

1. Sound Level meter, Luthron SL – 4001 brand for 3 units that Leq value has been converted with Sound Level Meter with the same brand (belong HIPERKES Central Java, calibrated with calibration numbers: E 080713 calibration dates 03 July 2008).
2. Thermo Anemometer, EXTECH-CFM/CMM AN-100 serial.
3. Dry-Wet thermometer
4. Stopwatch

In analysis chapter, there are performing survey data of data interpretation through SPSS-12 (Statistical Product for Service Solution version 12) program. Building mass block have reduction pattern of particular noises related with its orientation toward runaway.

Quantitative analysis approach performed to test the first Research Hypothesis, using Compare Mean Analysis from SPSS 12 with Independent Sample Test System One Way ANOVA test. Based on this analysis, identified that average comparison of noise reduction from each house in one rows of building mass block. Because, in this research there is perform 4 houses mass measurement, in the same time, then the result in SPSS data output would shows the average pattern of noise in 4 data tables.

Quantitative analysis approach to test whether orientation pattern of building mass have significant impact to reduction pattern of occurred noises, would interpreted through Compare mean Analysis and T-Pair Sample Test from SPSS 12.

Inside, each discussion of both Hypothesis test, would represented two hypotheses: that is Null Hypothesis and Alternative Hypothesis. With stipulation that both Research Hypotheses are proved if Null Hypothesis rejected, and Alternative hypothesis accepted. There are two requirements, which should be considered in performing this Hypothesis Test; the Null Hypothesis could be rejected. Both requirements are following:

1. From Probability Value, HO rejected if the Probability Value < 0.05
2. Based on T-Count comparison with T-Table, Ho Rejected if T-Count > T-Table
   (See Appendix)

Both requirements meant that H1 accepted, or equal with Research Hypothesis get proved.

4. RESULT QUANTITATIVE ANALYSIS OF HYPOTHESIS TEST

4.1 CREATE 66^0 DEGREE of ANGLE TO RUNAWAY VS OVERSHADOWING RUNAWAY

4.1.1 Description

The average value of sound on first chance of session measurement creates runaway angle shows that building orientation toward southwest, or overshadows runaway are higher relatively, than the first value that could be used on building with orientation that creates 66^0 angle to runaway or Southeast.

Table 03. Paired Samples Statistic Table

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	baratdaya	48.0379	240	3.54682	.22895
	tenggara	57.0377	240	4.40315	.28422

4.1.2 Relationship Correlation

Relationship Correlation between orientation and value of noise reduction shows 0.05 or o.056. So that, it could concluded that orientation variable have significant impact to occur phenomenon in field, due to building responds in reducing noise level.

Table 04, Paired Samples Correlations Table

		N	Correlation	Sig.
Pair 1	baratdaya & tenggara	240	.119	.066

4.1.3 Decision Making

Analysis due to research Hypothesis: Does building orientation toward runaway have significant impact to respond the noise reduction on building? Approach used ANOVA test. Significance level shows < 0.05 (that is 0.000), so that, H0 rejected, and H1 of research accepted. With other words,
That:
BUILDING ORIENTATION HAS SIGNIFICANT IMPACT TO RESPOND TO NOISE REDUCING ON BUILDING.

Table 05. Paired Samples Test Table

4.2 CREATE 66^0 DEGREE OF ANGEL TO RUNAWAY VS TOWARD RUNAWAY

4.2.1 Description

The average value of sound on first chance of session measurement creates runaway angle shows that building orientation toward northeast, or overshadows runaway are higher relatively, than the same value that obtained on building with orientation that creates 66^0 angle to runaway or Southeast.

Table 06. Paired Samples Test Table

		Mean	N	Std. Deviation	Std. Error Mean	
Pair 1	timurlaut	58.4495	240	5.89153	.38030	
	tenggara	45.8435	240	6.74298	.43526	

4.2.2 Relationship Correlation

Relationship Correlation between orientation and value of noise reduction shows < 0.056. This value is hold out from first measurement to secondary measurement.
So that, it could concluded that orientation variable have significant impact to occur phenomenon in field, due to building responds in reducing noise level.

Table 07, Paired Samples Correlations Table

		N	Correlation	Sig.
Pair 1	timurlaut & tenggara	240	.227	.000

4.2.3 Decision Making

Analysis due to research Hypothesis: Does building orientation toward runaway have significant impact to respond the noise reduction on building? Approach uses ANOVA test. Significance level shows < 0.05, so that, H0 rejected, and H1 of research accepted. With other words,
That:
BUILDING ORIENTATION HAS SIGNIFICANT IMPACT TO RESPOND TO NOISE REDUCING ON BUILDING.

Table 08. Paired Samples Test Table

5. CONCLUSIONS

Based on result, it could be concluded that in macro, reduction pattern of noise reducing that occurs on building block, which parallel with runaway are same, however, in micro, there is occurred reduction pattern of particular noises, due to orientation of runaway.

Based on research then, it could be concluded that mass block orientation has significant impact to reduction pattern of noise.There is required building management, especially for orientation and mass configuration to runaway, so that noise disturbance would overcome.

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2 - 7

The Development of High-Density Settlement In Landslide Hazard Areas in Urban Areas

Retno Susanti

ABSTRACT

The expensive urban land value caused low-income people do not have an alternative to construct their house. Inappropriate land but available to buy is only choice to live in. The land always interested because of the strategic location and nearby urban facilities. One of the factors that make the land inappropriate to build is the land elevation that has a high interval topographic line. It can cause landslide hazardous areas. In this case study in 49 small municipalities is situated in Gunungsari Ilir, Balikpapan Tengah, Balikpapan City, in early September 2007, slope failure hazard occurred that damaged houses, property, psychical traumatic and people died.

Redevelopment in this small municipality concerned with landslide mitigation. The first step is recovery and the second is reconstruction. The natural characteristics of the settlement preserved as low income housing and arranged good building and landscape. The house planned in long-term slope stability and respect to natural topographic figure. No built area planned much access, open space and mitigation ways for landslide hazard.

At this stage, redevelopment is in reconstruction phase, but stakeholders' participation is going better. The government bought people land that lost their house in the injury and then designing the land for primary town drainage. Town drainage transport water from lake to the Klandasan Kecil River, which is the lake became piling up and triggers land sliding. The local government support retaining wall finance, which located in Pierre Tendean slope steeper. In the other hand, the community participated by giving land to planned and personal favor. The private called for participate in building the

flat and commercial areas. Redevelopment doesn't change main land use as settlement which is state in Urban Plan.

This area identified as location in high landslide hazard, so that, it is important to outline additional requirements in use and build this land. After that, local government will play the role in giving land permitted and building construction permit in settlement that located in sliding areas.

Keywords: high-density urban settlement, landslide hazard, redevelopment

1. BACKGROUND ISSUES : HIGH-DENSITY SETTLEMENT IN HAZARDOUS LANDSLIDE AREAS

Rapid urbanization, one of the greatest socio-economic changes during the last five decades or so, has caused the burgeoning of high-density urban settlement. High-density urban settlement is one condition that happens in world's city, especially in Indonesia. Several high-density urban settlement consequences are how to provide urban facilities and infrastructure. The issues became to be crucial when the high-density urban settlement located in disaster hazard areas. One of the some hazard disaster in urban is landslide.

High-density urban settlement in landslide hazard areas formed from several cause:

1. Highly demanding of housing land in urban areas. About 2/3 of region population lived and work in urban areas. People with low income must be reducing transportation cost to going work. This people looking for land for living and build their house near by working place and urban facilities.
2. The factors of strategic location and highly demand of land rise up urban land value. In this case, the land has not suitable to develop as housing land. Appropriate land to develop is being expensive. For low-income people, they have no choice to having appropriate land to occupied
3. There is various natural character of Indonesian city. Mountain areas, hill-side and beach, formed the topographic various kind of Indonesian city. Areas with slope steep more than 45o must be prohibited from developing because of that high risk landslide.
4. The limited of land causing areas with high slope steep still developed as housing land. The price of this kind of land is affordable for low income people.

With urbanization expanding and population density being high, the possible damages to human lives and infrastructure become enormous.

According to these reasons, it is make sense for us to answer this question, why in inappropriate urban land to occupy (in this case is landslide

hazard areas) commonly found high-density settlement, especially occupy by low-income people. The reasonable factors explain why low-income people live in, there area near their working places and urban facilities. The disadvantages of high-density urban settlement areas are hard to put this housing in order. Unclear owner-occupier and land-owner are several causes. This kind of settlement did dot recorded in city statistics and they became “out of plan people’’. They are not being considered as a part in urban or city planning.

Certainly, local government must arrange list of requirements for land using and safety building codes in land with landslide hazard. The aim is to reduce and minimize negative impact when land sliding occurs. In case land sliding occurs by much causal high-density urban settlement, to minimize the risks that they might cause, there are some steps to implement:

1. How can areas re-development bring out in order to return people living back?
2. How can hazard mitigation adopted in areas redevelopment to minimize the risk, if land sliding occurs in the future.

The focus of this paper is redevelopment in high-density urban settlement areas which land sliding occur. These are important point to discuss: the impact of landslide hazard, redevelopment process and community participation, implementing redevelopment plan that consider hazard mitigation.

The case study is areas in Telagasari, at 49 small municipalities (Rukun Tetangga), Gunung Sari political district, Balikpapan Tengah sub district, Balikpapan City. This area located in strategic and high value land, with high slope steep, overcrowding and high density. After flood and land sliding occur at September 1, 2007, housing rehabilitation and settlement redevelopment were done incorporate with landslide hazard mitigation. Right now, they were in constructing phase. Take a long time to re-settlement the people in secure conditions and to integrate with new environment.

2. DISSCUSSION METHODS

Topics in this paper divided into several phase:

1. Theoretical review and theoretical term about high-density urban settlement, area development and landslide hazard.
2. Case study explanation, here is in 49 small municipalities, Gunungsari Ilir political districts, Balikpapan Tengah sub districts, Balikpapan City. Discussion begin with explaining existing conditions before land sliding occurs, continuing with land sliding chronologic incident, land sliding post-conditions, redevelopment proposal, and implementation/construction phase that in this time is still ongoing process.

3. Case study analytical discussion about landslide mitigation in planning and implementing perspective.
4. At the end of this paper suggest a conclusion.

3. HIGH-DENSITY URBAN SETTLEMENT AND LANDSLIDE HAZARD

3.1 High-density Settlement Areas

Settlement land use areas is an areas for living in or live areas and human activities, which support life and livability's. High-density urban settlement that mention here is an area located in urban, housing is a main land using, with building coverage under 90 percent. The house in this location less than 50 square meters. Each home occupied more than 5 people with lack of facilities and infrastructure.

In this case study, settlement characters divided into 2 types. The first type, in location with more than 45 degrees slope, the houses consist of a limited space, less than 50 square meters, non permanent building materials with narrow neighborhood access. The other type, located in land with slightly slope, each house has a space more than 50 square meters, permanent building materials with wider neighborhood access.

3.2 Areas Redevelopment

In this paper, areas redevelopment mention here is an effort to bringing back settlement nature after land sliding occurs, so it will be function as good as before. In order to redevelop this areas, the activity starting with plan, implemented and community participated, who live in this areas.

3.3 Landslide Hazard

A 'hazard' is generated and determined by the potential for damage, both tangible and intangible, by an extreme environmental event (Haque, 2005)
'Hazards' are defined as those processes and situations, actions or non-actions that have the potential to bring about damage, loss or other adverse effects to those attributes valued by mankind. (Michael J. Crozier and Thomas Glade, 2005)

Natural hazards can be divided into three main categories: atmospheric, endogenic and exogenic hazards (Bennett & Doyle, 1997 in Horeli). Atmospheric hazards are caused by processes of atmospheric nature, such as, tropical storms, hail storms, hurricanes and droughts. Endogenic hazards are results from internal earth processes, such as volcanoes and earthquakes. Exogenic hazards are caused by the operation of natural earth

surface processes including flooding, coastal erosion, mass movement and soil erosion. (Horeli, 2005)

The term' landslide' includes all varieties of mass movements of hill slopes and can be defined as the downward and outward movement of slope forming materials composed of rocks, soils, artificial fills or combination of all these materials along surfaces of separation by falling, sliding and flowing, either slowly or quickly from one place to another. Landslide is a general term for a wide variety of down slope movements of earth materials that result in the perceptible downward and outward movement of soil, rock, and vegetation under the influence of gravity. The materials may move by falling, toppling, sliding, spreading, or flowing. Some landslides are rapid, occurring in seconds, whereas others may take hours, weeks, or even longer to develop.

Water is commonly the primary factor triggering a landslide In this case study, land sliding occurs causes of heavy and prolonged rainfall factors. Slides occur following high intense rainfall, storm water runoff saturates Telagasari lake soils on steep slopes and infiltration causes a rapid rise in groundwater levels. Groundwater rise as a result of heavy rains or a prolonged wet spell. As water tables rise, slopes become unstable.

In the natural hazards community, mitigation is defined as the wide array of actions that can be taken to reduce vulnerability (Haque, 2005). Landslide mitigation is an effort and activity emphasized through prevention, reduce risk, rehabilitation, reconstruction before, right on time and after land sliding occurs. Even landslide mitigation is to avoid disaster also.

4. CASE STUDY : TELAGASARI AREAS

4.1 The Nature of Settlement

The area which taken to be a case study in this paper, is high-density urban settlement which located in 49 small municipalities (Rukun Tetangga), Gunungsari Ilir political administration (Kelurahan), Balikpapan Tengah Sub District (Kecamatan), Balikpapan City. There was a strategic location, middle in town and situated between two main-street, there are Ahmad Yani street as a main access to this settlement area and Pierre Tendean street as a secondary access. Pierre Tendean Street is in 10 meters high vertically above settlement level. The buildings in this settlement area are among 79 units.

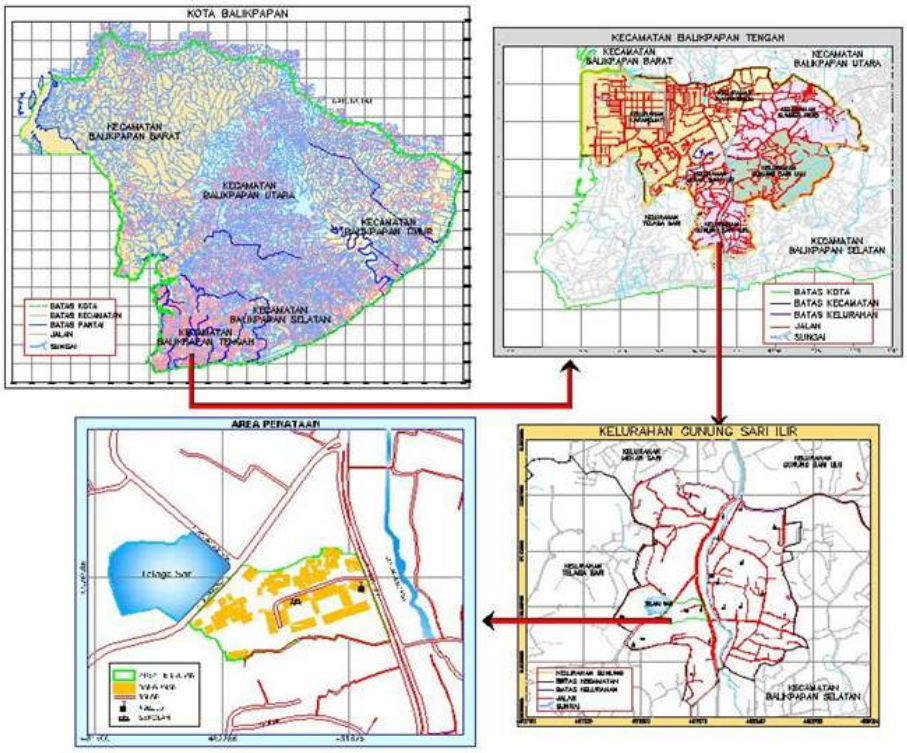

Figure 1. Drawing of Orientation Map of Telagasari Areas as a Case Study.

Figure 2. Case study areas situated on strategic location, nearby main street of Balikpapan City. Various contour lines with highest location are in west and slightly slope in eastern part. This area is a high-density land. Building and massing is out of order with un-clear orientation because the neighborhood access is not provided.

In order to get a clear understanding, I would like to explain the nature of this settlement. Before land sliding occurs, based on types of building materials, there are 37 house units (47 percent) are permanent house (with brick material wall), 4 house units (5 percent) area house with permanent and/or semi permanent (more than 1 floor, bases floor with brick material wall and in upper level floor made of woods or other light material). Then 38 house units (48 percent) are semi-permanent house (made of woods or other light material). There is various number of building levels starting from 1 until 3 floors. Majority is house with two levels, amount 50 house units (63 percent). House with only one level is amount 25 house units (32 percent) and finally house units with 3 level floor is amount 4 units (5 percent).

In this area, the land which lay near Pierre Tendean Street has sloop steep between 30o until 90o. In contrast, the land near Ahmad Yani Street has slightly slope about 0o until 30o. Topographic conditions give an influence to typology of house shape and house lay down. It is proven by fact that house which located in sloop steep between 30^{o} until 90^{o} have a specific characters, such as floor level is more than single, house space is between 15 up to 25 square meters, disorganized orientation, non permanent materials. In contrast, the land with slightly slope, the house majority floor level is more than single level, house space is wider than 20 square meters, clear house orientation, organized by neighborhood access and almost all of them are constructing by permanent material.

The main space uses is as living house, amount 66 units (83,5 percent). Another uses is shop-house amount 4 units (5,1 percent), office 3 units (3,8 percent), shop only amount 2 units (2,5 percent), midwife service amount 1 unit (1,3 percent) and mosque is 1 unit (1,3 percent).

4.2 Chronology of Land Sliding in Telagasari Areas

In early Saturday, September 1, 2007 at 05.30 Middle Indonesia Time Zone, land sliding occurs. Land sliding 10 meter at the bottom of Pierre Tendean Street causes from heavy rainstorm and absorbed into lake soils that located surrounding this settlement. The landslide was breaking off street path that connecting Pierre Tendean Street and RE Martadinata Street. The street was running down to the bottom along 60 meters length. At that moment, during 8 hours, heavy and intense rainfall poured down in Balikpapan City. The quantity of rainfall at that day is 175 mm, meanwhile, at normal conditions quantity of rainfall in Balikpapan City is 150 mm/month or 5 mm/day.

In addition, there was because of in-appropriate land uses, the disaster beginning from failure of the shear and retaining wall. This is due to the increased pore pressure in Telagasari lake, water forces grains of debris apart. Telagasari lake right now change becomes a football field. Millions

cubic of water, flows through Pierre Tendean Street, and breaking off the path.

Mass movement and heavy flood causes property damage, death and injury. The most serious condition is in 49 small municipalities, Gunungsari Ilir political administration. This landslide also through another small municipalities in Telaga Sari political administration, such as small municipalities 07, 01,12, 19, 20, 21, 22. In this occurrence, 3 people die, property lost, property damage and psychological traumatic. Building units which damage is 79 house units and 2 school building.

Many factors contribute to slide. Some factors causes Telagasari landslides:

- Areas morphology is a plain (former this plain is a lake eventually becomes sediment), in south side the plain turn into drainage absorber.
- Disaster areas formed by quartz sand, white-brown colors, small aggregate, porous, as a result from primary rocks, formatted from Balikpapan formation, from Middle Miocene age.
- Former land uses in disaster areas is a flooded area, stagnated, and in northern side is a open land (former lake), even though in surroundings areas is a main street, housing, shopping house and office building.
- A flooded area is a result of some drain from sewage system in upper side.

Mass movement mechanism in these disaster areas is: rainfall flooded open land (former lake) until this open land is full of water and when the water gets absorbed into the soil, the increase in weight is more likely to cause landslides due to the stronger gravitational pull. Water from rain fall accumulated and rise up (possibly water channel was clogged up), so the water erode unstable land. Because quartz sand becomes saturation of water, the retain wall beside the street was failure. Water and sand result a mudflow and sliding along the slope. Mudflow and land slide damages high-density settlement areas, which is in the bottom of it.

Figure 3. Post land sliding occurs. Pierre Tendean street breaking off, building house completely destroyed, human death and financial losses.

4.3 Redevelopment Settlement Areas

After land sliding occurs, the effort that realize was recovery. The aim is to recover conditions being normal situations. The implementation is improved emergency public facilities and infrastructure, healing physical and mentally illness from disaster victim and constructing public facilities and infrastructure. After recovery phase complete, the next stage is construction, which is dividing into 2 main activities. Firstly, constructing infrastructure to prevent flood and land sliding, reduce the risk and prevent people in high-density settlement from continuous damage. Second, redevelopment house and the neighborhood with some plan prepared and make people aware to live, with hazardous land.

Improvement of neighborhood construction was done in these ways:

1. Build a retaining wall with requirements that allowing wall to keep slope (sediment Telagasari Lake) from moving.
2. Repair drainage system by reconstructing and adding box culvert.
3. Previously, Telagasari plain was a lake, bring form back into former nature as a lake. A permanent drain built to catch water from surroundings sewage. This drain connected to the urban drainage system.
4. Repair a collapse path along Pierre Tendean street.

5. Pierre Tendean street which collapse repaired by strengthening construction, so it can normally function as a connector between Balikpapan City part.

These land sliding areas is a strategic urban location. Both in the Balikpapan Master plans and by urban development, this area is a high-density settlement. According to this statement, redevelopment proposes as a settlement was done with incorporating effort to minimize landslide and flood risk. The ideas were:

1. Identifying stable and appropriate settlement location to live in through environmental geology study.
2. Identifying accumulated, flooded and flowed water location.
3. Settlement re-arrangement considering land stability and avoid flooded and flowed water location.
4. Studying land and building owner-ship include permitted from local government.
5. Suggest building codes, as example is a settlement site planning with high requirements, such as reinforcing building construction, minimize Building Coverage, ordering Height Building, Building Construction, Accessibility Pattern and Landslide and Flood Mitigation.
6. Resettlement dweller in suitable space and integrate community participation.
7. Periodically, usually once in two years, controlling the building construction that located in landslide hazard areas,

Recovery phase was done just after land sliding occurs, therefore construction phase, like constructing retaining wall, new drainage system and main access improvement through high-density settlement were done also.

Building and neighbourhood stage development, arrange adaptively with hazardous landslide areas. This stage gain fully participation from dweller. Some houses that washed away and crushed were bought by local government, after that in the former land being constructed a new drainage system and for improve neighbourhood access. Some part of dweller still flees to the refugee accommodation or to their relatives. Another part of dweller still occupies their house in spite of improper conditions.

Figure 4. Imagerial Drawing Propose of Site Plan and Perspective of Redevelopment Areas.

5. AREA REDEVELOPMENT DISCUSSION

5.1 Compatibility of Areas Function on Urban Master Plan

This high-density settlement located on strategic urban areas, nearby main city access and urban facilities. According to Urban Master Plan, allotment of the land use is as settlement. It means this land uses compatible with master plan land uses. Right now, the status of land-owner majority is proprietary rights. In contrast, an area above the settlement is natural lake that gradually being a plain. Base on Balikpapan's Major's Decree Number: 188.45-176/1996, this area is located for city park. Inconsistency on regulatory and implementation explained from change land uses. Some part of natural lake becomes built areas and another parts become floods areas catchment from surroundings sewer. According to these explanations, it is a strong assumption that Pierre Tendean Street (which is crash when land sliding occurs) is a slope steep that keep lake mass from moving.

It's clear to understand that land where high-density settlement located is a retaining slope, all at once as a open drain flowing to the Klandasan Kecil river. Right now, the open drain exist, because of some part is covered by land, the open drain remains look like a tiny sewer.

With unwell-informed about morphology and chronology of land uses before, causes dweller doesn't understand and aware that in this location where high-density settlement located is a landslide hazardous area. Strategic location factors gradually changes this open areas becomes built areas. In former conditions, it's impossible for motorize through in to this settlement because of narrow neighbourhood accessibilities. While motorize cannot throw in, it means this locations is in the fire hazardous. Very close distance between houses, inflammable house materials, lack of near water source and fire truck cannot assess high-density settlement, causes this areas also as a fire hazardous areas.

After land sliding occurs, areas redevelopment implemented by bringing back main land uses as a settlement uses and added other functions, such as: commercial allocation, social facilities and public facilities. But, in future implementation must be considering topographic factors and landslide hazardous on behalf to determine Building Coverage, Building Height, Distance between houses or buildings and adequate neighbourhood accessibilities.

5.2 Compatibility of Building and Neighbourhood with the Characteristic of Landslide Hazardous Areas

Building and neighbourhood conditions before land sliding occurs divided into 2 characters based on topographic nature. Located on high steep slope, building construction is under basic requirements of building strength. It is very dangerous, both for dweller and surroundings areas. Type, shape, material and house orientation are under safety requirements. Need much cost to fulfil basic construction requirements and neighbourhood safety. The results is low income people assimilate with landslide hazard through simplify building construction.

Before building and neighbourhood constructing, local government meets people in public hearing to absorb what the people wants. The results were:

1. People prepared to reorganizing their house and neighbourhood with accomplish mitigation landslide disaster.
2. People's land which being surpassed by drainage plan (to retain natural water flowing), prepared to accept money from local government for compensation.
3. People who own the land and being planned, prepared to give some land or building for constructing neighbourhood access and reorganized house orientation.

To strengthen open plan, drainage constructed and above of it, main neighbourhood access was built. All at once, along the main access also as a green corridor. In the ways that predicted as a land sliding trench,

developed a vegetation layer for barrier to reduce shear force on a steep slope if land sliding happen again.

Driving forces of landslide come from lake area that sediment and Pierre Tendean Street (that on higher location) also, result from accumulated motorized tremble. For instance, to keep Pierre Tendean street steep from mass moving possibilities, retaining wall was construct and prove open space as safety distance from sliding, as wide as steep height. Neighborhood was reorganized to make motorize circulation can reach every location in this areas easier. The aim is to prove mitigation circulation even Fire Department vehicle.

Building requirements for strengthening house covers: construction engineering, decrease Building Coverage (60% maximum), restrict the height of small house (3 floors maximum), ordering the house distance (as width as house height minimal), recommend stronger house material and reordering house orientation face to the main access. To accomplish building requirements in strength, it is need to apply building construction that can minimize the risk of landslide occurrence. Some solutions for building construction are following contour type; deepen building foundation and limited bearing wall less than 2 levels. (Sydney O, 2002)

For people who gave their house and land, they were prioritized to occupy apartment that build. The apartment provided as people needs solution, and to complete hazard mitigation requirements. Landslide hazard mitigation requirements covered: construction, housing laid down, design and capacity. The apartment located on slight slope, former as school's lands that no use anymore.

5.3 Landslide Hazard Mitigation with Involving Stakeholders

Landslide mitigation is implemented the effort to reduce the risk from land sliding disaster. Stakeholders in this case are community, local government and private/investors. People being participated by offer the land that used for redevelopment building and neighborhoods, also build their each house by obey construction engineering requirements. Here, people act actively to rebuild their house and neighborhood. Besides, people have to realize about the risk and hazard on their land. People have been trained to recognize land sliding indication, doing rescue when disaster occurs and capable to take apart in recovery stage after the disaster.

Local government being participate by build retained wall, giving compensation to people who provide their land for constructing drainage and access ways, facilitating during recovery and construction stage. However, private called to take a part actively in constructing and managing apartment and commercial area that located in this land.

6. CONCLUSION

1. On urban areas, lands have highest economical value. Even though the lands have a high slope steep, it will be used as a built area. This inappropriate land will be constructed as a settlement site by low-income people, because of affordable price and other reason such nearby urban facilities.
2. Land with high slope steep has a limited area to be built. So, the house standing on limited site, in contrast, dweller necessity in space is not sufficient. Because of this lack, house height is more than two levels. Limited income result on limited abilities to fulfill basic building construction requirements.
3. According to Urban Master plan, land uses as a settlement have to consider topographic factors and land uses chronology before. Land use substitute from open space to built space bring consequences to the disaster (such as flood hazard or landslide hazard). This happened in case study location. Lake area gradually sediment and trigger land sliding through the settlement in the bottom.
4. Redevelopment in this high-density settlement which land sliding occurs can be useful to reorganize housing and neighborhood, become saver, more pleasant, healthier, with good facilities that meet dwellers needs. Redevelopment done in establish building construction requirements, minimizing Building Coverage, optimizing the number of floor level, house distance between, type of building material and open space.
5. Priority to occupied apartment will be given to people who dedicate their land. The type of house is not horizontally any more, but vertically with some suggestion. Living unit in apartment will be given as a compensation for some dwellers. Property rights will be justified later.
6. Redevelopment was done with consider compatibility aspect with Urban Master plan, compatibility with nature of land that located in hazardous landslide areas, and involving stakeholders to maximize disaster mitigation effort.
7. Property right and right for build on high-density settlement with landslide hazard will be prohibited with strong building construction requirements.

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2 - 8

Re-envelop Building; a Public Participatory Toward to New Urban Image

Yohannes Firzal[13]

ABSTRACT

Local government as regulator of urban renewal was giving opportunity for public to rebuild new downtown images. Especially for commercial districts which have old buildings at main road of the city.
Pasar Pusat, a commercial district where old buildings lay down at Pekanbaru downtown, used this opportunity as a public participatory movement to improve their urban image quality. This public participatory started by re-envelop building such as preservation, returned into original façade and rearranged commercial billboards which all done by them selves and self financed. It was continued to restore pedestrian line, parking lots, street furniture and some trees which financially by government.
Although it has taken time, public participatory to rebuild urban images could avoid some frictions in construction process. Now, this district became as a precedent project for local government to revitalize others districts. It helped to ensure cycling of public commercial activities, better for pedestrians, created new images, provided more urban amenities and dwelling society. Finally re-envelope building by public participatory can be resurgence local identity as well as new urban image.

Keywords: public participatory, urban image

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1. INTRODUCTION

Downtown revitalization changed not only physically matter but also urban images. Local government as city regulator was planning so many schemes to revitalize urban area. In construction phase, the planning always caused public frictions and side effects to local community. Therefore, local government was looking for other approaches to solve problems.

One of solution is opened for public participatory in revitalization planning steps. Especially to districts where old buildings and old commercial area lay on city main street. Pasar Pusat community was offered opportunity to improve their district image quality as public participatory to re-planning and executed by their owned. It means, community would construct their plan by themselves and self financed. It was started by re-envelop building such as preservation, returned into original façade and rearranged commercial billboards.

2. RESEARCH APPROACH

Pasar Pusat is a commercial district on downtown where old buildings were laid at main street, General Sudirman St. Research was doing on commercial district that had a segment of old building row.

It had been started six years ago. And it seems that the revitalization still continues. This process takes so long because there are several internal problems in community as responses and consequences. Initiated in 2002, formal public participatory was begun in 2004. In the beginning of 2008, government took over this project and continued as one of local government revitalization projects. So, research approach will explain condition in the end of 2004, in the end of 2007 and in the beginning of 2009.

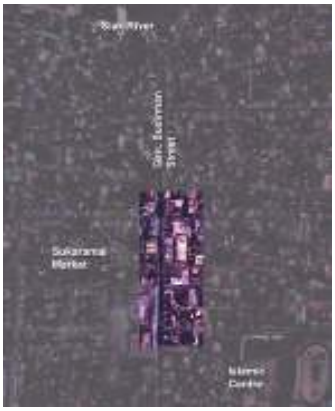

Figure 1. The Location

3. PUBLIC PARTICIPATORY

Public participatory can be defined as self community movement that comes from inside and doing by themselves. Cause of that, offering public to involve in government project can be a good option for downtown revitalization projects. In the beginning of Pasar Pusat Revitalization, public participatory was not an option. Local government policy was euphoria to demolish, renewal approaches, or more capital investment.

Local community, supported by Indonesian Architect of Institute, asked government to heard community aspiration as public participatory in Pasar Pusat revitalization project. Passing a long time negotiation, government agreed with community to rebuild new urban images as long as they understood all responsibility and consequences.

Figure 2. Façade Milestones

4. RE-ENVELOP BUILDING

According to Hill (1998), urban was built by hard elements (building and vegetations), open space elements and path elements. Lynch (1960) said that easiest urban visual images clues were physical form resurgence local identity. And according to Gosling (1996 in Mulyani, 1996), urban was reform by physical object and community activities that relation to interaction of its. And according to Cluskey (1997), urban character was defined as street wall which surrounding with buildings, vegetations and lands. Rapoport (1967 in Kristiadi, 1994) said that a good urban image can be defined as large number of variant but clearly pattern. Indeed, it was between extreme monotonous and chaos images.

Re-envelop building by public participatory was not only repainting building facade. But it was programs to maintenance building environment, such us to ensure cycling of public commercial activities, better condition for pedestrians, created new urban images, provided more urban amenities and dwelling society.

Figure 3. Façade Variation

Figure 4. Façade, vegetation, street furniture, parking lines and billboard.

Figure 5. Pedestrian and street furniture alignment.

5. CONCLUSION

Nowadays, Pasar Pusat Revitalization is entering the final stage. According project location in centre of city, it influences indirectly to city images. Further more, this public participatory can be a precedent project approach to resurgence other district by using their local identity.

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2 - 9

Stakeholders Role in Housing Development to the Low Income Community

Case Study: Medokan Ayu, Rungkut, Surabaya

Tri Dani Widyastuti[14]

ABSTRACT

Urban society, where a large amount of resident coexist by having pressure, showing the existence of elementary and new step in social evolution of human being. Progressively, the wide-spreading of town and its increasing population density number create various town problems. One of the problems is ready settlement for its dweller. In metropolis, problem in housing quality and settlement facility is much felt. The problem occurs because of very fast towny accretion, as a consequence of the high migration rate and the limited land destined by for adequate settlement. The limited funds for settlement and town management have also caused the facility of housing and settlement become limited. In urban area, the low income community is always the least fulfilled by the minimum requirements of housing facility and adequate settlement.

This article tries to focus on the role of society members in order to contribute in finishing problem of ready settlement, especially for low income society. Location taken as perception is the area of Medokan Ayu, Rungkut, Surabaya. Survey and depth interview performed within this research give description about role of the have class in society that giving real contribution in ready supply settlement especially for the low income society in urban area, Surabaya.

Generally, society who supplies this housing is local resident who has been living in the area since long time ago and own the wide land; and also recognized very rich as "landlord". They build the houses type 36 and also type 21 in their land and sell to consumer requires. Generally all of this

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landlord have low education and have no appropriate field background, hence settlement produced have low quality and also less adequate. But those settlements have been sold successfully. The low accessibilities in legal and governance area cause their work tend to be less professional. Because housing development is a responsibility of all stakeholders, government must pay attention to the society which gives the contribution in ready settlement especially for the low income society, in the form of construction and amenity to access the public facilities like water and electrics. However, all of these landlords have assisted the government to lessen the urban problems especially about slums in urban area.

Keywords: accessibility, governmental aid, participation of society

1. INTRODUCTION

Entering century 21, urbanization process expands very extraordinary quickly, inclusive of town in Indonesia. It is estimated in this time about 40% Indonesian resident live in the urban region, and by next 15 until 20 year will become 60% (Ramlan;1995). This condition will have an effect on to energy supports and energy accommodates the town space. With all its complex problems, town requires the space for the residence of its resident. Summing up the resident mounting in town requires the broader dwelling space, whereas town farms have progressively limited, so that conflict of interest and change of farms function do not be obviated which oftentimes sacrifice the impecunious clan of town. High economics development as the effect of industrialization and uncontrolled exploration of raw materials have also added the problem of town by increasing of contaminations that affect to change rule of environment (habitat) of human being and to unsafe urban environment. Urbanization has also improved amount and intensity of risk of disaster as the effect of human being's acts like floods, landslide, contamination, fire, even bizarre disease / catching. For a while phenomenon of natural disaster like earthquake, tsunami, mount erupt, mud volcano, progressively increases its frequency. This condition shows the quality of earth physically has been going downhill progressively (Marbun;1994).

On the other side, housing development represents the personal identity itself of human being. Housing has the meaning and meaning which is in, and housing circumstance will reflect the level of prosperity, identity and human being civilization. Housing cannot be seen simply as a dead object or medium of life *ansich*, but represents a process of live and also a struggle of human being in creating living space in society environment and its environment. Living intrinsically is coexisting, and for that reason housing function in life is as residence in an environment supported by infrastructure and facilities needed for social activities (Siswono Yudohusodo,1991).

2. PROBLEMS

One of future problem in urban area is about increasing population. It is estimated in the year 2010 world population will reach 7 billions, where more than its 60% will live in the urban area. In Indonesia itself, it is estimated in the coming year 2020 Indonesian resident will reach the number of 257 millions where its 49,5% will live in the urban. Resident in Surabaya in the year 2020 coming is estimated of almost 5 millions persons. This mean it will mount twofold from resident amount in this time (BPS: 2006). In housing sector, various international agreements confess that dwelling is one of the basic requirements of human being and become the basic rights for each and everyone.

Latterly thousands of citizens, what generally is impecunious society of town or society have low income production forced to leave dwelling in farm, is true representative of the rights of other party domination. The problem occurs hence is where and how they ought to fulfill one of that basic requirements, what the role of stakeholder will be in assisting housing stock for society, especially for low income in urban area like Surabaya.

3. DISCUSSION

To get the description from questions above, one phenomenon in role of all stakeholders in Surabaya is a sample how to minimize the backlog of housing requirement reached by low income production society in urban. Location of field study is in village of Medokan Ayu, subdistrict Rungkut, Surabaya.

3.1 Housing and Settlement Environment

Housing and Settlement Development is not simply translated as develop ; building roof but develop ; building the environment of settlement of human being in which it is happened by the process of environmental human being civilization. Quality of good performing settlement will colour settlement in our state in the next century (Siswono Yudohusodo; 1995). Housing area represents the especial component and most uppermost in forming environment of settlement in town, and quality from environment of this housing is very determined by its development perpetrator quality. Environment of housing and town settlement with quality will have an effect on make-up of intellectual dweller, include ability and yielded human resource quality. In turn it will partake to determine the quality of development of human being itself.

So that environmental quality of housing need to be better sustainability, and also need existence of division responsibility in environmental

management of the housing among governmental party, private sector as party of developer of housing and society. Constructing self-supporting ability of society in develop ; building house and its settlement as one of the ways to increase environmental quality of housing, can be done in a few facet. One effort is by the grow of society awareness about their responsibility to make each house competently, then later, to develop the technical knowledge about healthy house and also to increase the economics ability to fulfill house requirement. At one blow it creates the condition which conducive for growing and expanding self-supporting its society (Siswono Yudohusodo: 1995)

3.2 Housing For Low Income Production Society

House represents the first of basic requirements of human being and also represents the important factor in improving prestige. In the social aspect, house is considered as socialization means. Otherwise, housing supplies have correlation with the environmental quality of physic, complete environmental and infrastructure, facilities and also environmental safety and secure.

Involvement of developer in environmental management of housing generally is only limited until a house has been sold and dwelt by its dweller, but after that local government will responsible for keeping and maintaining the whole environment. Though housing marketing do not only finish until just by house has been sold but starting from settlement, functioning of installation of electricity, water, drainage, land ownership solving of dweller sigh to house damage, facility of environmental even show promise the in reconciliation usher the dweller (Umar Moechdar;1989). This responsibility should not only limited to its levying but also assist the local government in creating competent and healthy environment settlement society. Various problems happened in housing development will have an effect on housing growth hereinafter, especially for the very simple housing addressed to low income society to release some of its earnings for the expense of housing.

This capability background gives the basic result that housing development can be reached by society that have low productivity, too. But the aspect of capability is not only considered from its society ability side, but also considered from the side of housing levying by developer and private sector. Beside the expectation to government to create the conducive climate in order to give the society amenity to develop ; build self-support housing. Based on its characteristic, low income production settlement faction society in urban earn is classified in 4 (four) faction (KLH,1997), those are (a). Slums of downtown and town boundary (b). Wild Settlement center and town boundary (c). Self-Supporting settlement (spontanious) faction society (d). Settlement of weak economic faction society transition. The characteristics

given of each expected weak economic settlemet faction will be able to be developed as strategy to the up-grade settlement quality in town.

3.3 Housing development in Rungkut, East Surabaya.

Area subdistrict Rungkut has about 3.228.132 Ha broad and about 117.400 soul population. It is consisted of 6 (six) chiefs of village namely, Kedung Baruk, Kalirungkut, Rungkut Kidul, Medokan Ayu, Penjaringan Sari and Wonorejo. Area of settlement of subdistrict of Rungkut, East Surabaya is one of areas showing the existence of dynamic town growth. Local economic growth is marked with the existence of industry (SIER), commercial and service, which are very influencing the development of settlement area in subdistrict Rungkut . As one of chief villages in area of East Surabaya, hence Medokan Ayu is also non-stopped to round into the area settlement, accompanying circular road-works plan in East Surabaya (external JLDST) ring road and East Surabaya (JLLST). According to regional planology plan (RTRW) 2007-2015 Surabaya, JLLST connect the bridge of Surabaya Madura (Suramadu) with the international airport of Juanda in Sedati, Sidoarjo passing through Nambangan, Kenjeran, Kejawan Putih Tambak, Keputih, Sukolilo, Medokan Ayu, Wonorejo-Gunung Anyar. While JLDST connect the bridge Suramadu, Kedung Cowek, Mulyorejo, Jl Arief Rahman Hakim, bridge of MEER IIC, Kedung Baruk, Rungkut and penetrate the Gunung Anyar. This RTRW has been translated by all developer by realizing dwelling environment in strategic location. In 1990's East Surabaya could be a silent place, nowadays we can discover the middle-weight housing till elite, starting from the Lagoon Housing in Kenjeran, Bumi Marina Mas, Galaxi Bumi Permai, till housing own Pakuwon in Keputih, also, housing Penjaringansari in Gunung Anyar, New YKP in Medokan Ayu, and Mandiri Wisata in Medokan Ayu.

There be still more areas around Keputih, precisely in final place of exile farm secondhand (TPA) of Garbage Keputih, in which some luxuriant housing and citizen house from land; ground parcel. Other areas can be mentioned such as Wonorejo, Rungkut and Gunung Anyar. Those areas have flogged the developer develop;build the area settlement according to appetite of each, starting from home type 36 until house elite at the price of hundreds of million rupiah.

3.4 Role of Stakeholder In Housing Development For the Low Income Society

Condition of existing field indicate that the housing for the low income society namely type 36 and type 21 residing in chief of village of Medokan Ayu, develop;builded by developer or private sector. Characteristics of all this

developer among other things : **(a)** local kampoong's aborigine have lived the area since very long time ago. Generally they own the the area ancestor and own the wide land; hereditaryly **(b)** land owner with traditional Islam background called "Wak Kaji" (Mr. Hajj), because generally they have leaved to give or to obtain cash for the religious service hajj, **(c)** coming from faction reside in / able to be compared to society, **(d)** developing simple housing business principally is family system namely big family those who authoritative control the business. In chief of village of Medokan Ayu in this time there are ± 10 developers with the characteristic like the characteristic above, **(e)** educational background of all the developer generally is SMP and SMU and do not own the tying organizationally is profession of like REI etc.

In otherwise housing characteristics which they develop ; build are **(a)** for the faction of low income society namely type 36 and type 21, **(b)** in transaction system, credit is necessary, but out of banking service. As a consequence, buyer pay directly the credit to developer according to the agreement, **(c)** tend to apply the free design in the case of its house development, according to agreement of buyer and developer, **(d)** housing development ; build have no public facility / social facility, and even sometime have no facility of standard housing like clean water and electricity. Generally, society which lives in this housing enjoy the electricity from neighborhood with the certain agreement collectively. The problem of pure water provision can be solved by buying it individually **(e)** land ownership and certificate is still in collective form and rarely owning IMB / License Founding of the Building **(f)** No coordination among all developer of private sectors also between developer and the local government, in the case of housing infrastructure development operation. This matter can be found in the form of aquaduct / drainage system of each housing. Where there is not found, an aquaduct flows to the channel of mains and also larger river ones. The mentioned also met countrified of resident in area of Medokan Ayu. No wonder, if just rain moment of a few, hence irrigate have suffused as high as 30-50 centimetre. Old of its pond gyrate 4-5 clocks. If rapid rain enough, pond irrigate the overloadr to houses of kampoong resident. To anticipate the floods problem, local government does the efforts instructed to inspect channel in countrified which do not have aqueduct. Just taking example in countrified of Medokan Ayu**, (g)** sale act buy generally non before legal body but purchasing and selling agreement among developer, buyer witnessed by local government in sub district.

From description of field condition, hence it can be seen that the growth of housing areas and countrified in East Surabaya are emerge sporadically. The new emerging countrified and luxuriant housing are generally unattended from local government. The local government cannot control the new countrified expansion in East Surabaya. A lot of pawnbroker of land parcels (*kavlingan*) clearly do not have local government permit to develop;build the house (IMB) at the moment. That matter is confessed by

the Duty Executor (Plt), Lead On Duty Urban Planning and Settlement (DTKP) local government of Surabaya. Hundreds of thousand land parcels for housing do not get the permit to found the building. Even, the local government feels difficult to conduct the observation as energy of supervisors to observe the building without IMB is very few.

Fast housing growth in eastern area also brings the negative impact for ecology condition in Surabaya. For example, water absorption to the ground becomes less, a lot of floods pond increase, Green Open Space (RTH) becomes narrow and fish production becomes less progressively. The other impact which cannot be prevented by sea intrusion to continent is caused by a lot of plant around coastal area is used up for housing. If water flows out from sea into the continent and high volume of rainfall hence floods in Surabaya will occur. Evidence of area in East Surabaya is the existence of floods at Medokan Ayu that oftentimes soaks the location of SMA 20 and SMP 30, countrified, and also residents.

In this time Bureau of Planning and Town Development (Bappeko) of local government has mapped the area of East Surabaya by separating area provided for housing and conservation area. West area besides the turnpike of East Surabaya is planned for housing development, warehouse and white collars. On the other hand, east area besides the turnpike is destined for conservation area. In consequence, question will occur if buildings have already been founded beside east plan the turnpike of East Surabaya, regarding the local government law RTRW Number 3 / 2007 about the space arrangement mentioned. To anticipate this problem, Bappeko works along on duty is Urban Planning And Settlement (DTKP) of local government. Its target is mainly to conduct regional observation in East area, so that it can prevent the sporadic housing development and will not publish the IMB. While conservation area, residing in coastline of east Surabaya which broadness about 330.000 hectares starting from the bridge of Suramadu, Kenjeran, Keputih, Wonorejo, Gunung Anyar until Juanda. Conservation areas are cultivated by the mangrove so the damage will not emerge again. Those areas are expected to be able to prevent the floods, sea intrusion and waving attack.

The duty Urban Planning and Settlement (DTKP) of local government of Surabaya is restricting the area of East Surabaya so it will not be fulfilled by a lot of the concrete forest. That is obliging that the housing developer map 60% of its farm for the air-circulation area (RTH) and 40% for the housing. With the all these concepts, housing in area of East Surabaya owns adequate RTH, so that even area of East Surabaya has been covered by a new housing, start from luxuriant housing until modestly, its RTH will stay. Others, all developer is obliged to provide the drainage, mini booze and house pump by itself. Even, before the housing has been built, the physical drainage system for the rainwater arrangement has to be made beforehand,

even though to housing which emerges sporadically in ground *kavlingan*, the unrighteous of local in the reality is really difficult to control.

4. SUMMARY

From description above, there are several things to be focused:

- **(a)** Appearance background of private sector developer in village the Medokan Ayu, as one of assistive parties to fulfill the basic requirement of low income society for housing should be improved and reached.
- **(b)** Educational background which is less gives it's low impact to their accessibility to government and the other stakeholders.
- **(c)** Housing development such as happened in village of Medokan Ayu is uncontrolled and has no synergy, and finally will lead to the harmful impacts later on day.

Thereby have appropriately if Government follows up limitation the entire stakeholder with the construction, amenity and aid of facility of standard settlement. Expected their participation in area of housing development for the society of low income non oppositely; also become the time bomb for growth of town Surabaya later.

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2 - 10

A Participatory Planning on Housing Improvement Study at Rawa Badak Selatan North Jakarta - Indonesia: Problems and Potencies

Danto Sukmajati[15]

ABSTRACT

Rawa Badak Selatan - North Jakarta is one of Jakarta's slums areas which are needed to be arranged. It is not just because of its bad living quality but also because of its strategic location so that it brings along a unique problems and potencies. A Participatory Planning Method will be used in these activities so that the result will be sustained. With its most migrant inhabitants background, this method is trying to encourage each people sense of belonging to their environment as a part of the society. This paper is trying as well to present and identify problems and potencies of Rawa Badak Selatan as the results of participatory planning method, and end up with some recommendations to achieve sustainable housing and settlement at this area.

Keywords: Housing Improvement, Participatory Planning, Sustainable Development

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1. BACKGROUND

Kelurahan (Sub-District) Rawa Badak Selatan*, Kecamatan* (District) Koja, North Jakarta is not spared from the rapid growth and development of slum settlement that formed by urban community. Despite the government of Jakarta province has tried to minimize the slum settlement through project accomplishment such as MHT project, the result has not yet completely eliminated the existing slum settlements.

As shown in the evaluation of Slum Neighborhood Directory Year 2004 in which the *Kelurahan* Rawa Badak Selatan has two *Rukun Warga* (neighborhood units) categorized into slum neighborhood; RW 04 and RW 02, whose total area are 13.6 Ha with 13,169 people comprising 1.827 households. Considering this condition in order to anticipate the growth of slum settlement at the *Kelurahan* Rawa Badak Selatan, one requires a Study of Housing and Settlement Planning. Participatory planning method is applied for anticipating an optimum concept to match local condition, potency and population.

2. OVERVIEW OF RAWA BADAK SELATAN

RW. 02 and *RW. 04* as location of study are situated in the *Kelurahan* Rawa Badak Selatan. *Kelurahan* Rawa Badak Selatan was established in 1996, as a split area of the *Kelurahan* Rawa Badak (According to the Decree of the Governor of DKI Jakarta Province, No: 435; 1996). The wide of this area is 101.6 Ha. It forms a dense-populated area in Jakarta with 33,288 populations, comprising 12,169 households (density rate: 327.6 people per hectare). Economically, most of its population is categorized into mid and low level. Its geographical condition ($\pm$ 2 meters under the sea-level) serves the main problem of this area, especially in rainy season, is flooded or inundated by water. Geographically, location of the *Kelurahan* Rawa Badak Selatan is strategic as it is adjacent to the centers of North Jakarta municipality, *Tanjung Priok* harbor, festivity and entertainment centers.

3. METHOD

3.1 Location of Study

The study focuses on the area considered factually as slum settlement (neighborhood units) in the Kelurahan Rawa Badak Selatan, those are RW. 02 and RW. 04. The principal consideration includes such aspects as being adjacent to each other; both neighborhood units have the same characteristics in physical environment, socio-economy, problems, and potencies. Environmental drainage as the major problem in this area could

not be solved partially. Additionally, selection is also based on the criteria below:

- Both areas are included in the slum neighborhood as specified in the Slum Neighborhood directory (BPS - DKI Jakarta, 2004)
- Title of Land Ownership system is clear, either that of citizen's land or public land.
- Land use for housing and settlement.
- Availability and accessibility of road infrastructural network.
- Higher population density.
- Most building structures are not permanent construction and do not fulfill any health standards.
- Building density over 80%.

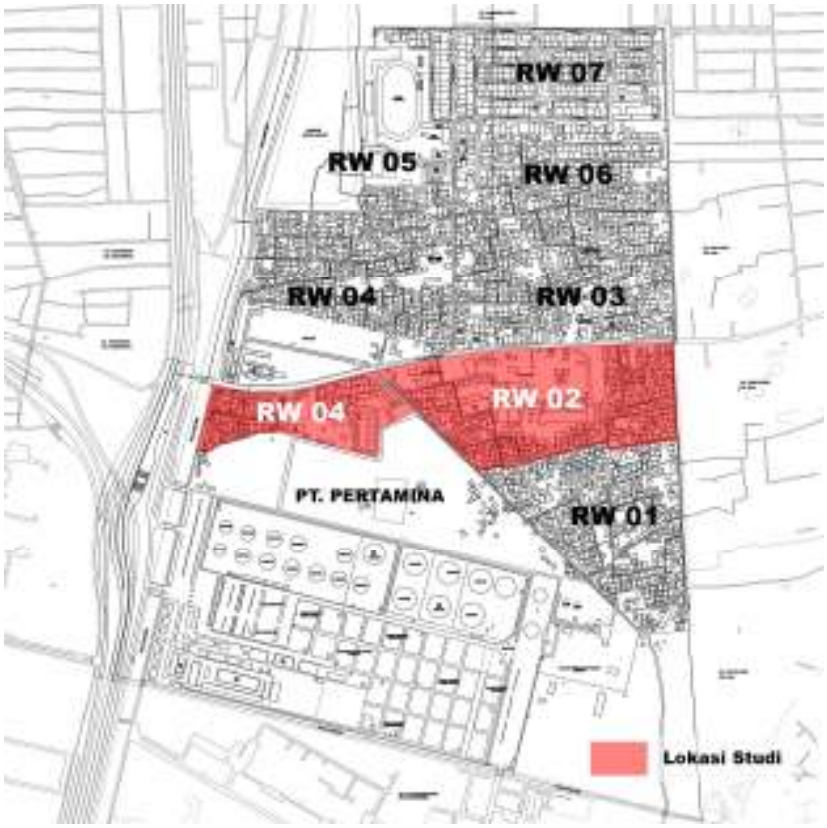

Figure 1. Map of study location at Kelurahan Rawa Badak Selatan

3.2 Participatory Planning Activities

According to Budimanta and Rudito (2008), process of defining scope of program for this activity is an opportunity to develop social participation. Through participatory planning, one may identify any requirement a local ethnic community may feel. In addition, using the existing information such as statistics data, report of reviews, social mapping, report on public plan, and others may be of helpful sources. Further, Budimanta and Rudito (2008) also suggest that building community trust serves an essence to create sustainable participation and activity.

Activities in the estate planning applies the participatory planning method as adapted from the standards as issued by the World Bank (1994), that is:

- Interview with key informants who have specific knowledge or experience about activity and planning accomplishment.
- Discussion with the target public related to some specific problems (such as land compensation, public facilities in the settlement location, income recovery, gender cases, and others) are held in groups in open deliberation.
- Social general meeting for information about planning activity.
- Structured direct-observation, that is, field survey on the planning accomplishment and individual or group interview for purpose of cross-check.
- Survey/informal interview: informal survey, local inhabitants, workers, local public servants (*RT, RW, Kelurahan / Neighborhood and Village)*, and employees of the department in charge of the survey using non-sampling method
- Deepen Case Study of environment and local inhabitants from various social groups for purpose of evaluating planning impacts.

As mentioned by Rudito and Famiola (2008), imbalances action as uncommon patterns of society will appear by observing social problems. Moreover, the description of social living can be clearly and functionally identified from the existing system that applying before (INRR, 2008; Rudito and Femiola, 2008). According to Stark and Roberts (2002), an unstructured observation is a field research method, by informal observation, often impromptu, and usually is recorded in a narrative fashion.

Initiated with an introduction with the department concerned, that is, the Office of *Kelurahan* Rawa Badak Selatan, it serves an attempt to obtain a proper description for experiential judgment regarding the case study to be carried out. Next, the field observation is implemented in self-help manner into the location with unstructured interview - a short interview with several local inhabitants and social figures in the study location. Through such activities and other support-data, one gets an illustration of the local citizens and their environment in quantitative and qualitative bases. Visual

observation is not related only to physical condition but also that of the target community. In man environment approach, it is clearly identified that any physical formation serves a reflection of social values which affects the local inhabitants.

Information as primary data shall be searched and collected through opinion expressions, discussion, and focus group discussion (FGD). The opinion expression aims at reviewing social ideas and aspiration for environmental betterment and planning. Social aspiration, social opinion, social interpretation, social views will have similarities and differences. These differences and similarities may occur in groups; due to economic status, social status, vested interests or professions and so on. Such differences should be settled by amicable deliberation through meetings for mutual concession and agreement that will be concluded at the preparation of program including local inhabitants' decisions. Results of the meetings will serve, then, a fundamental basis for facilitating the community to develop social-based housing.

Figure 2. Discussions with local community

Analysis of location is carried out by incorporating field conditions obtained through field survey, focus group discussion and opinion expression with the community into *RRTRW Kecamatan Koja tahun 2005* (The Neighborhood Plan of the Koja District Year 2005), Standards of Public

Structures and Infrastructures of the DKI Jakarta Province and Directory of *RP4D* (The Housing and Settlement Plan) of North Jakarta. Discussion with the local inhabitants is held in non-formal and easy setting for their perception about environmental betterment and recording their agenda related to that environmental betterment. The discussion is organized at every neighborhood units (RW.02 and RW.04), held at the village hall, secretariat, or office of the *RW* (local neighborhood units). This activity is attended by *RW* administrators and representatives from any RT (Households) included in the planning location, and several local senior. The time is exactly *ba'da Isya* (after Islamic evening prayers) to allow the working citizens to participate in the discussion. Issue or topic of the discussion is related to any points obtained in observation, and therefore the conclusion matches results of observation and deepen interview. This method is commonly used in intermediated (quantitative-qualitative) researches.

4. PROBLEMS AND POTENCIES

4.1 Physical Environment

The characteristics of physical condition are dense and slum. The major problem is not-working drainage due to the existing poor flood-pile and most water is directed to the single water-gate flowing to Sunter River at west-edge of which the water surface is sometimes higher and otherwise, it flows back to the settlement area. Most status of land within the study location belongs to public ownership and some are under private concession (*SIPPT*). The data describes that there are seasonal population that occupy the location in large number and higher mobility characteristics.

The settlement is dominated by permanent building aged over 20 years in density. Building fronts and position are not well-arranged. Most buildings are 2 floors, specifically new developed-buildings, as permanent structures on their ground floor and semi-permanent on the upper floor. Almost all buildings do not meet standards of healthy construction and environment, or are concerned with space-requirements, light-illumination, and aeration. Considering the location adjacent to the sea-front, clean-water requirements in the study location apply *Palyja* or *PAM* (Water Company). Almost all area has been reached by the clean-water networks. Quality of well-water or ground-water is so poor that it does not meet a general standard to drink. Most road-beds in the study location form narrow venues whose minimum width is about 2 meters only. This will result in such problems as emergencies in the form of fires and others. In addition, almost all building structures do not meet any urban-planning standards.

Worship, education and economic facilities are sufficient. The worship facilities in the District of Koja per year 2004 consisted of 85 Mosques, 292 Musholas, and 13 churches. The educational facilities as per 2004

comprised 41 privately-owned kindergarten, 94 elementary schools, 35 public junior high schools, and 22 senior high schools. Dissemination of educational facilities is well-distributed throughout the village area. Rawa Badak Selatan has 1 *pasar inpres* (president-funded marketplace), 1 *pasar lingkungan* (traditional market-place), and 7 *waserda* (department-shops). About health facilities, Rawa Badak Selatan has not owned *Puskesmas* (community health center). Now this village still shares the existing community health center in *Kelurahan* Rawa Badak Utara, and that the local inhabitants who need medical treatment frequently require higher cost of transportation than medical cost. In smaller scale, a simple medical clinic has been available in the RW. 04 funded by *Bank BNI* in cooperation with the *LSM Mer-C* (a non-government organization).

Figure 3. Condition of physical enviroments on RW. 02 and RW. 04 Rawa Badak Selatan

In addition to public and social facilities, most building structures inside the location are dominated by occupant-structures and occupant-business structures such as shops, small workshop, food-stall, etc. Along Plumpang road, some building structures are dominated by commercial and small-scale trade structures. From this illustration, the study location is considered as the occupant-area surrounding by facilities or other allocation-purposes.

Moreover, in addition to the existing local-problems, both Neighborhoods have spatial potencies. First is related with social conditions in which the local inhabitants are more *welcome* in manner and not defensive or suspicious as commonly seen in other dense-populated settlement areas in Jakarta. Second potency of the area concerns with public awareness of reforestation. Almost any household has varieties of plants even their home-yards are too narrow or they even have no yards. About the environmental sanitary, the location has a public toilet self-managed by the local community. The public toilet facility is a contribution from PT. Bogasari, that despite established since 1991, its condition remains relatively good and clean.

4.2 Social

Population is dominated by productive-age group that the data should show that *Kelurahan* Rawa Badak Selatan has potential workers in sufficient number. However, one can also see that the jobless population and non-permanent workers or permanent workers contribute half of the productive-age population. Most population in the productive age contribute partially accommodated in business and public potencies. This condition is strongly observable in the physical appearance of the settlement of Rawa Badak Selatan in which most of its population occupy informal sectors, using the land in their limited concession for various business orientation, and even occupying public spaces such as road-beds, river-edges and other open spaces).

Gehl (1991) illustrates such condition as *"invaded city"* as characterized by unavailability of public space due to commercial activity domination either formal or informal. Furthermore, according to Gehl (1991), this condition requires hard-work to recover the spaces to the public uses, not only related to their physical status but also social needs. In case of Rawa Badak Selatan with its population structure, environmental planning should meet any attempt to increase environmental support.

Another matter one may express out is that the strongly strategic location of Rawa Badak Selatan makes the rapid growth of boarding houses. The phenomenon describes greater seasonal population of higher mobility. Wirth (1968) describes such condition as a symptom of urbanism characterized with transience or tendency that urban people do not know the whole people in their settlement area since the settlement develops into

crowd area and therefore those who live in do not know each other. In such a condition, any urban citizen moves to carry out activities among urban citizens without reluctant feeling, because in their opinion, the activities are their own business without emotional involvement in wider sense of urban public citizenship. The symptom in the population of Rawa Badak Selatan is observable in their daily lives such as plotting open space for individual or collective interests in temporary and steady manners.

They are more guided by rational choice in decision making related to their lives and that it is surprising when they generate higher mobility; ability not to be bound with the existing traditions and otherwise, they tend to develop new traditions directed by their rational choices. Therefore, they have tendency to tolerate other traditions or adapt new traditions provided that they meet their rational choices in more economic reason. Another significant point drawn from the results of discussion with the focus group is a description of great social participation in the environmental planning. Such strongly social positive response is proven from physical realities which, despite patching, it seems to have shown higher attention to the better quality of environment.

Educational background of most population in Rawa Badak Selatan is categorized into low level. This is clearly related to their limitation to access formal employment and therefore the informal sektor is just growing rapidly. A great many commercial and industrial growths there in the location are not reachable for them as employment opportunities that it becomes a driver for the new comers to enter specifically those who have requirements for the world of formal employment.

Of the observation results, one may say that social empowerment in Rawa Badak Selatan has good potency. Communication between the village part with its neighborhood units, social figures, and village councils works well and effectively. As one may interpret, active and effective social institutions serve a basic potential for the study of housing and settlement area. Sport-based community (RW.01, 04, and 05), *majlis taklim* (Islamic Assembly) exists at every neighborhood units, and art group *Qasidah* (RW. 02, 03, and 04), emerge as examples of potential and positive groups. Preparing structure and infrastructure program as the public requirement, community of Rawa Badak Selatan always routinely organizes *rembug warga* (public meeting) to have physical activity program prepared according to the priority scale. This activity includes administrators of RT/RW, social figures, religious figures, *karang taruna* (neighborhood youth association) and *PKK (women group of household welfare societies)*. Some other activities that involve the local citizens, as well, are cleaning maintenance, gardening and environment. Despite slum appearance, reforestation impresses clearly. Almost every household, regardless its situation in narrow venue and limited space, is decorated with green and leafy plants.

4.3 Socio-Economy

Partial community of the study location has their lives dependent upon informal activities as laborers. One may say that the major-driver of social economy is informal sector they develop themselves. Whereas other local economic resources include office and workshop activities. As an urban part which grows in its function as the center of economic services, and business and services and industrial activities, the later developing culture is that which emphasizes on money. Meanwhile, the money is an indicator of social position and prestigious achievement. Because of money, self-ego is more interest than others, and this matter appears clearly in market activities where one's position depends on his or her financial and social position in their bargaining power.

There occurs a higher social-gap between populations directly related to the commercial access along the major corridor which divides Rawa Badak Selatan and those who occupy the space behind. There are bound to one limitation due to their territorial borders. Good leadership the Neighborhood leaders have is indicated through many collective activities where mutual life aspects become common attention of their citizens. In such a gap, there is a process of social integration in which mutual symbiosis between both are then able to support their lives and serve an integral part of their community's survival strategy.

Higher-income and lower income communities develop together the quality of environment towards betterment though they are related with technical standards and regular planning for the desired quality of environment. Higher income community requires workers from the lower income community and otherwise, the latter requires the former for employment opportunities. The relation likely generated between them is ecological in manner with mutual symbiosis. Accordingly, one may observe the increasing symptom of life-style that generally tends to result in consumerism, individualism dan exhibitionism as relevance to the information era in which the information the community may access into is uninterrupted or unselected and that they will affect any life-aspect. This trend carries a strongly individual impact in case one can not find a solution to block it.

Pluralistic pattern in many social groups have separate characteristics with tendency to result in polarization of high, mid and lower income. This is observable in their day-to-day relationships in the forms of *arisan* (social gatherings), *pengajian* (Islamic teaching), art, and sport groups. The points above indicate changes in the community. Developing motives in the community may be illustrated below:

- Government: regulator, controller of resource exploitation, protector and climate creator, pioneer of change process which is constitutionally legitimated according to delegation of responsibility and authority by parliament and applicable legislation.
- Business community as profit-maker by exploiting resources they dominate or affect, serving the people for mutual benefits; developing properties/assets to grow their business according to the regulation and business ethics.
- Solidarity community, social groups which emphasize on mutual interests, mutual welfare, mutual requirements, justice and distribution according to the social values and norms in addition to the applicable legislation.
- Individuals with various personal values and norms.

Each agent of community has close and specific relation with technology and resources according to the norms and values he follows. Some of them are similar as they follow the universal norms and technology. They could also be in contrary since different norms direct their own technologies to fight for the same resources. Conflict of interests serves a changing context of space and time. In such a context, what one requires is regulation which regulates interest arrangement. Urban planning and its implementation clearly have conflicts of interests and need some regulation and institution for interest adjustment.

5. DISCUSSION AND RECOMMENDATION

5.1 Community Participation in the Urban Development

What is meant by community is any people organized in groups with shared interests, for profit-making such as vendor groups, shopper groups, marketer groups, or non-profit making such as RT/RW (neighborhood units), *kelompok pengajian* (religious Islamic teaching groups), arts groups and others.

Individual roles in the housing development in RW. 02 and RW. 04 are so great. The problem facing them is that most individuals are from lower and less income families. The development pattern is incremental in manner; redundant, below-standard, unplanned and without construction permit. These characteristics become identification of settlement in Rawa Badak Selatan. This characterizes a community without strong regulation for wealth distribution, and therefore, social gap emerges as the single dominant appearance. What one needs is that they should have some regulation to have themselves organized in the community so that their settlement appears more regularly and finely arranged.

Meanwhile, local neighborhood units serve a territorial unit in the city with characteristics that come nearer to the community's characteristics. RW. 02 and RW. 04 in Rawa Badak Selatan respectively–have values of solidarity that bind their social members. Good leaderships of the two RW administrators are indicated by many collective activities where life-aspects become mutual attention. They form a heterogeneous community; comprising higher income who live along the main road and lower income behind them.

From field observation, there are some significant characteristics for one to identify. There exists some interdependence between those of lower income with those of higher commercial income growing ecologically. Those of higher income and commercial position frequently need power of the those of lower income and the latter also requires employment/places for them to market their commercial commodities. The leader of RW often plays important roles as intermediary function between both groups of the people for assistance from the strong for the weak. In this way, there are some attempts to maintain the village. This includes construction of drainage, bridge, water-gate, water dike and others. Principally, this model is a form of distribution in micro scale that may solve the problems of urban development, and their maintenance. In addition, it also serves as the barrier for conflict between the two-class communities.

Positive concept of the RW as a non-profit institution should be developed in the context of urban development. Some important points to develop are training on standard construction and good construction management for sufficient accomplishment in construction and proper phasing in accordance with the community's financial ability.

5.2 Potential Community for Self-Financing

In the context of urban development, economically and physically, there is a relatively less experience to show up in which the community may play roles in initiating commercial businesses or financing themselves in sustainable manner. Contribution collected from the community of higher income/commercial orientation tends to be used up for physical environment renovation instead of managing it as capital for greater activity.

Actually in fact, there are reasons to argue about the importance of community to take parts in commercial activities for financing themselves. This appears in such requirements to solve any problems that without any collective handling, they will likely result in social costs such as: poor quality of housing (health interruption, poor productivity, less security and so on), deficit educational and health facilities, less employment and income and others.

Organizing community in cooperative manner, those of lower income has a strong bargaining power for expanding into their areas. Here in this context, cooperative movement development in the community has an objective of strategic dimension. It serves a realization of the distributive and fair and stable development concept.

5.3 Managing Community Activity in Urban Development

This system focuses on non-bank financial institution with technical and management services that serve as intermediary functions between the parties inside the community and outsiders. Specifically, this system applies to any development activity for creating employment and raising income or physical development supported by several educational/formal training and informal activities. Therefore, Tribina (tri-management) concept (human management, business management and environmental management) can be applied without depending too much on the government, and otherwise, become a process of increasing interdependence of several activities in the community according to requirements and open opportunities/achievable by the public citizens concerned.

Community including interest group, functional group, and public group could become members of the non-bank financial institution and get services from the technical service and management units who play parts as community advisers (of which they are likely from the academe). With system of the like, roles of the local government in the development become less loose due to the community participation as pioneers. The local government plays dominant roles in creating climate for supporting the development. Local public budget is supplement to the community and is often negative in manner.

To make the non-bank financial institution as a far-reaching and professional movement, social preparation and establishment by the bank are required as integral part of customer service. In addition, one also requires some subsidy to finance the technical service and management unit and the non-bank financial institution that are, on their outsets, can not stand with the less capital the community has.

The local government is responsible for any external infrastructure as an integral part of the whole urban area. Likewise, public facilities such as marketplaces, mosque, hospital and others are commonly used by the urban people. However, infrastructure and public facilities inside a community area whose usage is specifically for the local inhabitants shall become a charge for themselves. Community organization in cooperative manner is not intended for confrontation instead for preparing them to do collective bargaining so hat the process of urban development is felt more in justice.

5.4 Empowerment of Functional Community

The greatest functional community of RW. 02 and RW. 04 in Rawa Badak Selatan includes shoppers and material stores. Other functional communities such as fabric factories and piping factories occupy in Rawa Badak Selatan. The functional community has collective potency to create housing that may contribute the area regulation and environmental betterment.

Related to the empowerment of this functional community, one should invite development consultants to handle promotion house-customers in order to establish a cooperative firm, to escort arrangement for housing ownership credit, preparing plan and construction permit, construction management to reduce expenses, to give advises for adapting their own requirement plan prior to development, to provide advises for accomplishing interior and accepting contract for estate management. The professional services serve alternatives one may provide for better empowering functional community than the real estate developers do. The community as employer has rights to control and there is guarantee that the results will match their requirements and ability.

5.5 Ideas of Estate Development on Development Consultant Model

The Ideas of estate development on development consultant model by the community in the socio-economic concepts of RW. 02 and RW. 04 communities in Rawa Badak Selatan are derived from the following related points:

- Integrity in development in the form of sektoral projects and local development.
- Attempts to activate target groups/increasing social participation for better environment.
- Development sustainability by the target groups and replicability .
- Interdependence with the functional community that is self-funded for their financing in long term.

Estate Development on Development Consultant model is not managed by an individual alone. He works in team comprising community whose interests are different in human resource and environmental management.

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Kampung Oriented Development Model: A Rapid Appraisal of Local Communities

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ABSTRACT

It is obvious that compact city development nowadays becomes wider-spread as one of believed implementation to achieve a sustainable urban form and to reach sustainable communities. The strategy has popularly been tried to be implemented in developed countries in various efforts progressively. In the same time, under debates and unclear situation yet, approaches to deliver compactness strategy are also tried to be applied in developing countries. One of potentials and challenges of this compact city strategy is how to apply its concept into densely, mixed-use, organic, and slum conditions of *kampungs* as main spatial structure of urban settlements in Indonesia. This paper firstly revisits *kampung* as an important space unit for social, economy, and physical entity in Indonesian urban structure. Discussion of *kampung* is also positioned to relate its significances to deal with housing and settlement problems in urban area. A *kampung* oriented development (KOD) is introduced as an underlying model for compact city development model in Indonesian cities. Based on some propositions of developed model, this paper furthermore aims to examine direct responses from communities of Yogyakarta's *kampungs* through a rapid appraisal method. Some findings such as population density control, vertical living based on actual *kampung* life, tradition and awareness to carry out activities inside *kampungs*, support public transport use that suitable with the needs, optimum size of *kampung* that corresponds to *kampung* facilities and infrastructure provision, as well as some specific programs related to social welfare improvement may adapt and improve appropriateness as well as other future directions of city compactness development in a developing country to deal with its community concerns.

Keywords: Compact City, *Kampung* Revisited, *Kampung* Oriented Development, Rapid Appraisal, Sustainable Communities

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1. HOUSING PROBLEMS IN URBAN AREA

Housing problem is impossibly discussed without related to other daily life factors, from its social dimension to development technique. Clearly in the constitution of Indonesia in article 28H point 1, is described that “Each person has a right for a life of well-being in body and mind, to a place to dwell, to enjoy a good and healthy environment, and to receive medical care.” Explicitly, since dwelling is people basic need therefore it should be based on a comprehensive policy, strategy, as well as program towards an integrative sustainable condition.

Indonesia has a huge number of population, estimated in 2009, the number of population will reach 228 million inhabitant (Biro Pusat Statistik, 2008). Population growth will be constantly high, around 1.4% during 2005-2010. From this one fourth billion of people, half will reside in urban areas. Based on BPS 2008 population census data, population rate that lives in urban areas increases from 35.9% in 1995 to 48.3% in 2005. In 2025, this proportion will change and there will be 68% of Indonesia population lives in urban areas. This phenomenon describes that urbanization level in Indonesia still tend to be higher in the near future. This inevitably brings some consequences on difficulties to control urban sprawl and to manage urban degradation in many parts of urban areas.

Moreover, since limitation of urban carrying capacity, this urbanization process is inevitably not followed by better level of urban welfare conditions, including house affordability. The low level of this housing affordability automatically would trigger growth of inadequate condition or slum in urban areas. In Indonesia nowadays is noted that there are 54.000 hectares of slum areas and spread in more than 10.000 locations. Besides, data of backlog of housing from Bappenas (2005) also shows that in 2009 this number will stand at around 11.6 million. Big part of this backlog of housing will unavoidably happen in urban areas. Indeed this number of backlog will be higher if such building fairness, land ownership, and other related indicators are considered.

The backlog of housing or discrepancy on housing supply has already been discussed intensively in policy level. Akil (2004) has tried to simulate that every year started from 2004, housing supply should provide 1.2 million/year to bridge this gap. However, from this scenario, undoubtedly government and other stakeholders in formal sectors (private sector and other NGO scheme) is just able to provide maximally 15% from total demand. The rest of 85% demand as recent real condition has traditionally been supplied by informal housing sector or community sector. According to these conditions, The State Minister of Public Housing has launched several related programs such as GNPSR (National Movement for One Million Houses), *Gerakan Seribu Tower* (Development for Thousands Tower of Housing), development housing in big scale area through site ready development (Kasiba/Lisiba) and housing development interrelated with regional development (RP4D).

However, these national housing policies and strategies (KSNPP), especially in urban areas, have still faced many problems seriously. One of

biggest issues is that this strategy is somehow lost from actual context of urban system where *kampung* or other traditional settlement are still dominant and takes an important role in Indonesian urban structure. For these inappropriate transformations, model or approach of housing or settlement development is usually getting wider discrepancies with aimed markets, focus problems that want to be prioritized, and interrelated recent actual issues such as sustainability.

2. *KAMPUNG* AS URBAN SETTLEMENT MODEL

Kampung is a familiar word in Indonesia urban space and has very strong relationship with Indonesian culture itself. Etymologically, Sullivan (1992) differentiated clearly that *desa* is a residential area within a rural and *kampung* as residential area within a city. In *kampung*, people can find social-culture pattern ala Indonesia. Nowadays *kampung*, which physically becomes a multi dimension residential area where it covers not only physical term of settlement, but also social, economic, and cultural entities. *Kampung* was born through strong relationship along its urban history and grows organically based on internal and external carrying capacity. However, recent *kampung* mostly positioned into negative pole in urban development discussion with its higher densely inhabitant, dominated by poor and disadvantaged residents with lack of access to basic infrastructure.

Discussions about *kampung* (refers to a residential or settlement area within a city) in Indonesia are varies, complex, and interesting to show some existence problems in Indonesia cities (see for example; Setiawan, 2003, Steinberg, 1998, Guiness, 1986, Turner, 1985). Nas (1987) explicitly wrote that Indonesian cities cannot be analyzed without discussing *kampung* as integral part of the cities. Setiawan (2003) additionally stressed that despite the clear significance of *kampung* for Indonesian society, the Indonesian government continues to ignore the socio-political aspects of development in *kampung*, especially in housing markets. It means that social considerations that are vital to the formulation of urban and housing policies have thus been neglected. It substantially does not solve the basic problems of housing in Indonesia.

As considerable beliefs, *kampung* in Indonesia really takes an important role substantially in the process of urban development. As informal or popular settlement sectors in other developing countries, *kampung* settlements have provided serviceable and affordable shelter for a majority of Indonesian urban households, more than 80% (McGee, 1996). As Setiawan (2003) stated, *kampung* represents a dynamic process by which groups of people--mostly the poor--provide their own housing, control their environments, and engage in collective efforts or mutual assistances (*gotong royong*) to improve their lives. Despite its clear significance of *kampung* for providing space for urban housing, the Indonesian government continues to favour the formal housing sector and to direct its assistance to it. *Kampung* from perspective of Indonesia government has been neglected as potential resource and confirmed as impermanent solution to cope with recent housing problems.

Development that really focused on *kampung* development was popularly named KIP (*Kampung* Improvement Program). Based on Susilo and Taylor (1995) the KIP was initiated in 1969 coincided with Repelita I (midterm national development program), primarily to alleviate the low physical living conditions of the *kampungs*, using a minimum of technical and administrative resources. However, KIP was only focused on an infrastructure upgrading program for *kampungs* based on the needs of installation and improvement for roads, pathways, water supplies, drainage, and sanitation. Assumption that the idea of improvement of limited housing and infrastructure would also stimulate the improvement the socio-economic conditions in *kampung* community, should be reviewed again. In fact, as Setiawan (2003) indicated, that these physical improvements also tend to be temporary and is not a sustaining program. After several years, many of the improvements made under the programs have decayed and no further improvements are made by either the government or the communities.

3. SUSTAINABLE SETTLEMENT IN A COMPACT *KAMPUNG*: CASE OF YOGYAKARTA CITY

Sustainable development, on the other hand, has been proclaimed as main aspect of housing development in the world. UN Declaration in Rio de Janeiro known as Agenda 21 has mandated to deliver sustainable development in all aspect of human life, including housing and settlement (Chapter 7: Promoting Sustainable Human Settlement Development in UNEP, 2008). Followed by the 2001 UN-Habitat conference held in Istanbul with theme “shelter for all” and 2002 Sustainable Development Meeting in Johannesburg with theme “sustainable cities” specifically emphasized shelter for all and making human settlement safer, healthier, more liveable, equitable, sustainable and more productive. The concept of adequate shelter and sustainable settlement has officially become an important part of the urban housing strategy.

Significantly, “sustainability” appears to be emerging as one of the competing rationales for planning and design in almost entire worlds, urban developments have also faced both new challenges and new references, how precisely to implement this concept into urban characteristics appropriately. Furthermore, recent years an idea of a compact city has crystallized as one of popular alternatives in urban worlds as a model to achieve sustainable urban form, mainly in developed countries (Jenks, et al., 1996; De Roo and Miller, 2000, Williams, et al, 2000). Meanwhile, in the developing countries, attempts of compact city implementation still face the basic social-economic problems of the communities (Burgess and Jenks, 2001). These conditions consequently bring different setting conditions of compact city attributes (Roychansyah, 2008).

These emerging trends seem to focus that this concept has been placed as an interesting guideline in urban policy strategy without deeply background consideration on its objectives and characteristics (Jenks, et al, 1996). From the existing studies related compact city, we concluded that compactness is characterized by several attributes that each of them has

same roles in conducting level of compactness (Roychansyah et al., 2004, 2005). Among attributes have strong causal effects and coherent relationships. Despite one attribute has strong influence to increase another attribute simultaneously, it cannot still represent the collective meaning of compactness or degree of relationship yet, rather than single interpretation contributed by each attribute to the compactness pattern. Those are six attributes: activity concentration, population densification, public transport intensification, city scale (city size) consideration, social welfare justification, and there exists a process to realize compactness respectively.

If developed countries courageously declared that compact city is one of popular remedy to deliver a sustainable urban form, many countries in the developing worlds still face the basic problems of urban life, such as housing affordability, jobless, poverty alleviation, environmental degradation, and so on. As early development of compact city concept in the developed world, now this idea still in debates on how this concept is able to be applied in the developing countries cities where they have different characteristics from their counterparts in the developed countries. Nevertheless, Burgess and Jenks (2001) stated that there are some potentials of developing countries urban condition in which easier condition to deliver such a compactness condition, namely population density. As substantive considerations, we should absolutely understand that although there are different settings of compact city development in the both conditions, there are still spaces to explore some potential and to apply some ideas in appropriate ways.

Regarding idea of compact city development in urban areas in Indonesia, this paper considers *kampung* as important part of urban area in which a deep analysis should be carefully taken into account. Yogyakarta City located in Central Java is undertaken as case study to show some significance potentials in delivering city compactness. The city itself was founded in 1756 and the *kampung* has traditionally clustered together as important part of community settlements in the urban structure. Up to now, population of Yogyakarta City is about 420 thousand, while the population density is about 120 persons/ha. It is distributed differently in 14 wards (*kecamatan*). There is a ward with 100 persons/ha, contrary there is also a ward with more than 200 persons/ha. This population density is more than enough as main consideration of population densification of compactness attributes explained above. Consequently, this condition also brings high density in built urban areas with lack of open space and forms irregular patterns of buildings and pathways.

In the term of activity concentration, the *kampung* has offered a suitable model of mixed use activities. As McGee (1996) argued that the *kampung* represents a ‘dualistic’ model of the socio-economic structure of cities in developing countries, traditional and modernity, formal and informal, legal and illegal activities. Since it is argued that unity of activities in the same location by means of mixed-use development will lead to greater opportunities for successful sustainability in the area, balancing residential and non-residential uses in Yogyakarta City based on land use data of its 14 wards represents very interesting findings. Percentage results of non dwelling to dwelling usage are variously big, 0.3-0.6 (8 wards) and 0.8 - 1.4 (6 wards). This condition may be emerged by various forces like limited of

engagement spaces in the *kampungs*, creativity or challenges in community facing the poverty, as well as lack of law of enforcement in urban space order. However, inevitably this condition primarily initiates an ideal condition of *kampung* as an entry point of compactness development.

Furthermore, issues of transportation in the compact city are arguably the single biggest environmental argument relating to urban form, especially for the developing country. Burgess and Jenks (2001) argued that urban transport usage in developing countries is not triggered by a planned policy rather than by limited access to own private vehicles. In contrast, now in Indonesia cities, this condition is worsened by a market driven. People can brings back a motorcycle to home easier, even without any down payment in the beginning of their contract. Although there has been an initial good model in bus rapid transit (BRT) service in Yogyakarta City, namely Trans-Jogja, released in the beginning of 2008, a rapid evaluation of the project and relations with other supported transport system have not forecasted well yet. However, we can examine Yogyakarta City transportation condition by comparing composition of vehicle numbers. The condition is still dominated by private vehicles, mainly by motorcycle (240075). The second place is place for private car (32332), followed by truck (12730), public taxi (776), and public bus (620) respectively. Accumulation of private vehicle numbers, both motorcycle and private car, is around one third of Yogyakarta City`s population itself. This number would be greater if we consider transport condition of Yogyakarta Metropolitan Areas (Yogyakarta City and its surrounding sub-urban areas that compile some wards from its neighbour regions, Sleman Region and Bantul Region). From the view point of compactness attributes, the transport condition of Yogyakarta City is so far from an ideal situation in an urban compaction, where a competitive public transportation system may be a key initial action to overcome other crucial problems in transportation. Moreover, more efforts toward finding appropriate intensification of public transport in medium city size in developing countries like Yogyakarta City may rapidly be a main target for a reduction in private car dependency, and will change the travel behaviour of the residents.

The consideration of city size and access, aimed at providing as many daily needs as possibly within minutes of most habitations. Consequently, it is necessary to consider certain city attributes in order to determine a more manageable city where a certain population, activities, and the physical pattern of the city work together in harmony. Yogyakarta City itself has an area that is very reachable with easy access, even from surrounding areas (some wards of surrounding neighbour regions). The position of Yogyakarta City is in the center of the region of Yogyakarta Special Region Province, precisely in the central southern part of Java Island. Inspite of it is the smallest area in the region, but Yogyakarta City is acknowledged as a center of trendsetter of the region, even in Indonesia. That is why although Yogyakarta City population is just 400 thousands bit more, but actually in daily activities, this area should be considered larger and then generates its

population numbers double, almost one million peoples. This sprawling Yogyakarta City or Yogyakarta "Metropolitan" Area is very crowded with various famous activities, from culture, education, tourism, creative industry, service, and commercial.

Making compactness in Yogyakarta City, from view point of city size should firstly consider how the city is able to facilitate all activities, including pulling population to live in the city area. Population reasonably lives in the sprawl area triggered by some causes. Besides of lifestyle including social segregation, the main problem may actually be caused by both misinterpretation and mismanagement conditions of *kampung* as main (inner) structure of the city. As a misinterpretation stated by Setiawan (2003) that *kampung* as informal settlement is seen by people including official government as a traditional form of housing or urban elements that represents a temporary solution for urban settlement problem. Furthermore, as further strong relation, it also put a mismanagement to let *kampung* development as second priority of development after suburban areas (formal sector settlement) where assumptions of benefited direct economy exist. In this context, related to city size consideration, the existence of *kampung* as close settlements that support directly urban activities and its program to bring such compactness development program back to the site become crucial significant to apply.

Moreover, if we examine the social welfare target in Yogyakarta City, composition among welfare groups in the city is still dominated by higher welfare group (welfare III), followed by lower welfare (welfare I) and middle welfare (welfare II) respectively. There also emerge of increasing welfare condition for middle and higher welfare groups, including welfare plus group that is the highest group of welfare groups, during 2004 to 2006. At the same time, there is decreasing welfare condition for lower welfare. Despite it can be seen as economic improvement of higher welfare groups, but in the lower groups there is actual worsened condition. The pre welfare group in which the poorest group categorized and in the lower welfare group in which the lowest category of welfare, obtained significant decreases to perform better condition of social welfare in 2006. Since one benefit that the compact city claims to have is to promote the increased quality of life for residents, the implementation of compactness development in Yogyakarta City actually should be closely connected to social equity, with a focus on quality of life, represented not only by equitable access to urban facilities, but also social and economic welfare, including space allocation in the *kampungs*.

Indeed, the compactness development in Yogyakarta City is still far from a realization. It has just blossomed as an idea or in the beginning step of formalization of a model. It will need a long term process of development and needs to be dynamic and interactive model. This paper furthermore tries to introduce a compactness development model in Yogyakarta City with its *kampung* as main orientation as more bit discussed above. Inevitably, type of compactness in *kampung* would be different compared to compactness models in developed countries. Adopted from Hayashi (2003), there are three types of compactness, those are concentration type with vertical life concentration, cluster type within larger city size and divided into several

administration areas, and homogenous type with similar developments through the areas. Urban compaction model in Yogyakarta City would be same as homogenous type, since almost there are no different characteristics among the *kampungs* in the city.

4. *KAMPUNG* ORIENTED DEVELOPMENT (KOD): PROPOSITIONS

Kampung Oriented Development (KOD) model is arranged as an idea of implementation for compactness development in Yogyakarta City in this chapter. Basically it can be seen from two considerations. First, structurally *kampung* as described above has a significant role in broad range of dimensions in the urban structure. The structure of *kampung* in inner city spatial structure is also intentionally clear to state that *kampung* for this model of development might be a permanent solution, not a temporal solution.

Second, historically *kampung* experiences with many schemes of development from many resources. Although it contains several weaknesses, *Kampung* Improvement Program (KIP) is widely known as a masterpiece of successful program in Indonesian *kampungs*. However, KIP is only focused on an infrastructure upgrading program for the *kampung* based on the needs of installation and improvement for roads, pathways, water supplies, drainage, and sanitation. Assumption that the idea of improvement of limited housing and infrastructure would also stimulate the improvement the socio-economic conditions in *kampung* community, should be reviewed again. In fact, as Setiawan (2003) indicated, these physical improvements also tend to be temporary. After several years, many of the improvements made under the programs have decayed and no further improvements are made by either the government or the communities. Supporting this argument, the condition of many *kampungs* is getting worsened today, passing their optimum capacity of their environments, if viewed from their standard of quality of life (uncontrolled population density, lack of open space, environmental degradation, emerging many slum areas, and so forth). An urgency to redevelop *kampung* as further step in re-improvement of *kampung* condition becomes a realistic and an arguable idea.

Kampung oriented development (KOD) is systematically a strategic attempt through a comprehensive policy using *kampung* as focus area of development that encompasses several intensive developments based on characteristics of *kampungs* as integral part of urban structure (in Yogyakarta City, Indonesia), like transit oriented development, people oriented development, access oriented development, and activity oriented development. All of these developments are fundamentally framed by SOD, sustainable oriented development principles. Every single theme of development is dedicated to a specific characteristic of the *kampung*. For instance, access oriented development is purposed to open the *kampung* from outside positive networks. It would continuously supports *kampung* to get opportunities making improvements by "*kampung*" itself adequately.

To show KOD relevancies with what government is doing recently in several housing related policies, the paper uses evaluation of housing development in wider scale area namely Kasiba-Lisiba (commonly refers to parcel or lot ready development). Here, spatial plan aspect is taken into account as significant factor to evaluate how the Kasiba-Lisiba developments has already developed in term of ideal level (as described in term of reference Kasiba/Lisiba), factual level (as implementation in the real condition), as well as actual level (where such sustainable development approach is drawn into consideration). With same method, infrastructure provision is also taken into account to evaluate some running development projects. In both evaluations, there were discrepancies among three levels of evaluations. Based on analysis result, it can be assessed that among Kasiba-Lisiba or Lisiba BS (area development that uses existing condition of its environment such as infill development, not newly developed area), Lisiba BS has big relevancies in term of balancing three-step of evaluations and has minimum risk during its development, since it would be synchronized with existing developed area. Some of adjusted implementation methods of Lisiba BS that recently developed by local governments would be closest development method in delivering *kampung* oriented development model.

Furthermore, turn to spatial lay out, as recommended by Urban Task Force (2002) in forming urban structure from dispersed urban structure to the compact one, *kampung* oriented development (KOD) in Yogyakarta City is very possible to be divided into some units based on some scenarios: *kampung* administrative unit, *kampung* physical unit (based on spatial unit analysis), or *kampung* activity unit. Basically, the difference of delivering sustainable communities in *kampung* is that a new development should be integrated step by step within community participation context. It is true that a culture consideration should also be particularly taken into account of sustainability concept in the developing countries, besides of environment, social, and economic considerations as suggested by common definition of sustainability (see for example Wheeler, 1996). For example, vertical living as a consequent effect of compactness development in developed countries should meet another suitable alternative models or approaches if it is implied in developing countries where vertical lifestyle reasons have not socialized properly yet.

5. RAPID APPRAISAL OF LOCAL COMMUNITIES FOR KOD MODEL

In this chapter, the paper will show some considerations taken into account to carry out KOD through a rapid appraisal. This method has been conducted in 4 types of *kampungs* along the Code River. From housing feasibility study that has been summarized by Housing Research Center (2007), backlog of housing in Yogyakarta City for 2015 dominantly located in wards where they have area along the river (riverbank areas), for example Mergangsan,

Gondokusuman, Danurejan, and Pakualaman wards. The riverbanks of these areas are usually used to informally reside with higher density population. Dominantly they work as informal sector workers in Yogyakarta City and surrounding areas.

Table 1. Characteristics of Case Studied *Kampungs*

No	Aspect	*Kampung* A	*Kampung* B	*Kampung* C	*Kampung* D
1.	Name	*Kampung* Terban Utara	*Kampung* Ledok Terban	*Kampung* Prawirodirjan	*Kampung* Cokrodirjan
2.	Administrative	Kelurahan Terban, Kecamatan Gondokusuman	Kelurahan Terban, Kecamatan Gondokusuman	Kelurahan Prawirodirjan Kecamatan Gondomanan	Kelurahan Suryatmajan, Kecamatan Danurejan
3.	Location	Central city, around 500 m east of Tugu Yogyakarta.	Central city, around 500 m east of Tugu Yogyakarta.	Central city, around 500 m east of Kraton Yogyakarta	Central city, around 500 m east of Malioboro Str. Yogyakarta
4.	HH number	58 HHs (1 RT)	60 HHs (3 RT)	76 HHs (3 RT)	Around 80 HHs, 34 HHs live in public housing (70% is native residents)
5.	Characteristics	It represents best practice of *kampung* development. Established by renowned architect, Romo Mangun, and still well maintained environment. It is located at the northern riverbank of the Code River of Yogyakarta City with easy access to surroundings area.. It becomes a tourism destination in the city. New Romo Mangun Museum was built in the sourthern part of *kampung*	It represents a natural type of *kampung* without any improvement programs yet. The condition tends to be a slum. It is located at the northern riverbank of the Code River of Yogyakarta City, just over the best practice location, but with less access to surrounding environment. This *kampung* can also describe the situation of best practice before interaction with Romo Mangun.	It also represents a natural type *kampung* without any improvement program yet. The difference between the second *kampong*`s condition is in easier access to be connected to surrounding environments and geographically not a too steep riverbank. This *kampung* also has more mix condition of residents background..	It represents a *kampung* that has been changed by improvement program (vertical public housing). Some residents have moved to vertical leased housing built in this area. It is located at central riverbank of Code River of Yogyakarta City. The mix of residents between native and newcomer is relatively big compared to the other location.

Today, in these riverbanks of Code River there are 2 vertical leased public housings (Rusunawa) namely Jogoyudan public housing and Cokrodirjan public housing. There are no initiatively follow-up programs tried to be combined with relocating kampong residents into those new vertical housings such as public space or engagement space for economic activities. Despite they have stood already for several years, in general people have argued that “rusunawa” or leased public housings like in these 2 places are not yet an ideal solution to answer complex housing problems. It has just cleaned partially a small piece of dusted big old picture. From this point of view, the primarily step would be reasonable to undertake a rapid appraisal of KOD model idea onto local communities along the Code River.

Rapid appraisal is a method that offers development workers a useful set of research and appraisal tools to obtain quickly information from local populations about their conditions and their needs. RA methods also enable local people and outsiders to plan together appropriate interventions and evaluate the impact of development interventions after these have been carried out (Bergeron, 1999). RA methods have some advantages such as low costs, adaptable, and flexible to bring out qualitative aspects that would be missed out by close-ended surveys, enable to make verification to local people. In contrast, RA methods have disadvantages including poor generalize ability of findings, lack of clear validation procedures, and susceptibility to manipulations by informants. Since it is categorized to belong to "participatory-type" methods, RA tends to raise expectations among the population about program activities. In this paper, RA firstly designed to conduct basic survey into community leaders, and after that the carry out result will be used to conduct another continuous public appraisal that may involve many people in a *kampung*.

Firstly, the study has chosen 4 types of *kampungs* along the Code River with some characteristics as shown in Table 5.1 above. Furthermore, same intensive interviews conducted to 2-3 community leaders in each *kampung* to get related information about their *kampung* conditions. Initially, all community residents are viewed as potential informants, but in this study first we selected to interview community leader of *kampung* who know their community well and are honest in their responses (RT leader (*Ketua RT*), young people leader (*Ketua Pemuda*), and senior member of *kampung*). Scope of *kampung* conditions asked to community leaders embraces three different conditions of *kampung*. These are firstly existing condition that is real condition where they would face in everyday life, secondly proposed condition that is described as KOD Model, and third their ideal condition that may explain their ideas freely out of the proposed condition. All conditions then divided into 5 sections that describe a representation of 5 compactness attributes discussed in Chapter 3, they respectively are population densification, activity concentration, public transport intensification, city scale (city size) consideration, and social welfare justification. The last attribute that is a process to realize compactness is not taken into account when conducted appraisal, since it should be considered along change of time.

6. RESULTS AND DISCUSSIONS

Based on RA results, firstly, from population densification attribute, existing *kampung* conditions where clearly dominated by dense settlements with limited physical environments. These conditions are mainly experienced by the residents in *Kampung* B, C, and D. Uncontrolled *kampung* population growth and environment degradation inside *kampungs* area also worsen their living environment. In contrast, residents in *Kampung* A do not undergo to the above conditions dominantly, since they have a systemic population control that managed their HH number very-well and admit that their physical environment has been eligible to deliver their daily life. The proposed

conditions such vertical living alternative was very supported in *Kampung* B,C, and D, with some additional requirements. Substantially, these demand that some alternatives should be connected with activities that promote a good theme of living condition, integrated with programs that improve other *kampung* public facilities and infrastructure, and focused through activities that solely prioritize to native resident improvement. On the other hand, technically, proposed alternatives should fulfil some requirements like taking a concrete feasibility study, finishing land status problems, and adjusting equitable leased cost and other roles related proposed activities. An optimum density control that exists in the case study as very familiar role for *kampung* residents was also interesting finding that may adapt to find appropriate fulfilment between number of residents and their activities, as well as their need for infrastructure or other facilities.

Furthermore, from the view point of activity concentration, existing condition of case studied *kampungs* have shown that their daily activities carry out in the accessible distance around *kampung* location. They daily do works which dominated by informal sectors and send their children to school in the locations that easily accessed from their living location. They mostly aware to take advantages from their potentials of living location and deeply understand of their limitation of social-economic background. Their responses to propose a *kampung* and its surrounding areas as an easier accessible area and as an integrated area where they can do many activities are very positive. They argued that a focus program that mainly dedicated to women in *kampungs*, unemployed people, and very low income people is crucially started first. Some ideas is actually ready to run or need alternative supports to be a sustainable program, for example in *Kampung* A and *Kampung* D. Special spaces provision for non-dwelling activities also needs serious plan to be a realization. Even in *Kampung* D where they just moved already in vertical space, they have acknowledged that non-dwelling spaces are very difficult to be arranged in their new environment.

Since they deliver daily activities in their surrounding areas and other accessible distance places, all *kampungs* similarly explained that they do not need recent existing of public transport. In *kampungs* B, C, and D, the residents rather depend on motorbike than use any public transport means. They argued that private vehicles like motorbike tend to benefit economically and efficiently. Creating *kampung* as a place that well connected with surrounding environments and supported by better public transport service is a big hope for *kampung* residents. Even though, an improvement of public transport service may not be used extensively by *kampung* residents, especially in *Kampung* A, since they have some reasons such as good access to their daily activities and rather strong traditional walking-cycling influence that may not use public transport means. However, the residents of *kampungs* would appreciate if a new public transport service will be introduced with some improvement conditions like better route service to almost entire city, tariff based on travel distance, and *kampung* as origin based travel. These such improvements may influence the residents of *kampungs* to prefer using public transport, especially for residents who want to make long trip with their families.

Existing condition of *kampung* as a place where can be accessed and optimized as living and making activities in *kampung* A and B are getting better. The promoted condition to control number of HHs in the area may influence better condition of adequate access in the both *kampungs*. In *Kampung* A for instance, this generation to generation control of HHs is very helpful to accelerate the community needs provision. On the other hand, in *kampung* C and D, since limited access and unclear border of their areas, they claim that these problems are still dominant as handicap to deliver their daily life smoothly. An ideal concept of better access and optimum size of the *kampungs* may be reached through HH limitation towards optimum density of *kampung* population and making a clear boarder administratively as work well in *Kampung* A and B. Another ideal concept to cope with access-size problems emerged dominantly in *Kampung* C and D would be an improvement for physical access inside *kampung* areas and a development of additional public facilities that designed to be appropriate to *kampung* population.

Realization of last attribute that is better welfare target in *kampung*, significantly showed that lower education background and social-economic condition of *kampung* community have consequences on social-economic access for community itself. They cannot achieve an ideal condition for works that can support their daily life better, missing chance to improve better environment management such as waste, building renovation, and so forth. These conditions are experienced in almost case studied *kampungs*. An idea of prospering *kampung* where a place that can support their aims to reach better quality of life will be undoubtedly supported. Nevertheless, in detail some specific treatments should be designed and addressed to overcome specific problems. Problem based treatment in a specific programs may cover a demand for a specific theme in delivering welfare improvement activity (in *Kampung* A), physical environment improvement program as a preliminary activity (in *Kampung* B and D), or more empowerment of *kampung* related formal institutions should be emphasized explicitly (*Kampung* C).

From results of RA and above discussions, now we will be able to grasp a state of the art of the case studied *kampungs* based on each attributes of compactness. Some new findings would be interesting to describe how an ideal *kampung* should be approached related to its *Kampung* Oriented Development Model. Furthermore, all of these findings should be summarized in quite simple matrix and in the next step as mentioned above, the study should be continued to identify real information from wider *kampung* communities based on this first categorized findings. These further steps are considered to obtain contributions separately from each specific *kampung*, in order to capture all the relevant information in detail from broader related communities, A workshop with local communities will become an important part to concretely take community participation into consideration.

Despite in chapter 3 generally showed that Yogyakarta City is still so far from ideal condition of a city compaction based statistical data analysis related to attributes of compactness, but based on RA resulted many revealed detail findings. It is important to note that some ideas respectively

like population (density) control, vertical living based on actual *kampung* residents conditions, tradition and awareness to carry out some activities inside *kampungs*, support to public transport that suitable with their needs, optimum size of *kampung* that corresponds to *kampung* facilities and infrastructure provision, as well as some specific programs related to social welfare improvement would be great consideration for KOD adjustments in further developed models. In this case, schemes in some design approaches to correspond programs and activities needed in KOD model become a significant step. Moreover, coincided with the above step, it is also necessary to firstly measure compactness attributes and its indicators in the *kampungs* statistically. Those would clearly describe possibilities of some adjustments through KOD model as a representation of compactness development in the developing country city.

7. CONCLUDING REMARKS

Firstly, in the beginning this paper has explored related problems in delivering housing and settlement development in urban area. In this level, within urban housing in Indonesia city context, *kampungs* and its entities that embrace social, economic, culture, as well as physic dimensions showed an important role to represent urban settlement model in Indonesian cities that dealing with many related problems. It is common as considerable beliefs that *kampung* is an integral part of urban structure in Indonesian cities and takes direct role substantially in the process of urban development. Recent urban problems that faced in the context of housing needs are how to overcome affordability and backlog of housing, how to tackle growing slum areas, as well as how to synergize sustainable development concept in delivering housing needs.

In the middle part of this paper, *kampung* which represents an important space unit for social, economy, and physical entity in Indonesian urban structure has been revisited to search model or approach of housing development that deals with aimed markets, prioritized problems, and interrelated recent demanding issues such as sustainability. In this part, the paper has also worked to examine potentials and challenges in Yogyakarta city as a case study in delivering urban sustainability. A compactness development strategy is adopted to analyze related urban conditions based on its representative data. The results have been correlated and reviewed from compactness attributes perspectives that cover respectively population densification, activity concentration, public transport intensification, certain city size and access consideration, social economic welfare target in the city areas, and as well as a development process to deliver compactness condition.

Finally, in the last part of the paper, *Kampung* Oriented Development (KOD) model has been introduced as important approach for both initiating compactness development model and overcoming some problems in *kampung* development. It is systematically a strategic attempt through a comprehensive policy using *kampung* as focus area of development that encompasses several intensive developments based on characteristics of

kampung as integral part of urban structure. Through a rapid appraisal method, the paper has revealed some interesting preliminary findings. Some ideas such as population density control, vertical living based on actual *kampung* conditions, tradition and awareness to carry out activities inside *kampungs*, support to public transport that suitable with their needs, optimum size of *kampung* that corresponds to *kampung* facilities and infrastructure provision, as well as some specific programs related to social welfare improvement would be great challenges for KOD model to be adjusted in further schematic models.

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2 - 12

The Use of Morphological Mapping in Tenure Analysis of Informal Settlement

Wiryono Raharjo

ABSTRACT

It has often been said that tenure security is one of the primary goals in human settlement development. But there is a marked difference between informal settlement and normal (formal) settlement in terms of tenure acquisition. While normal settlement sees dwellers gain security of tenure prior to the construction of built forms, in informal settlement tenure has to be negotiated even after a long period of occupancy. Even though dwellers may never gain what they have negotiated for, their occupation continues. This leads them to a position of ambiguous tenure.

Ambiguity of tenure is one reason why a settlement is called 'informal'. Under such a condition the risk of dispossession remains, albeit with state tolerance that allows dwellers to continue their habitation and appropriation of the built forms. Within this tolerance, dwellers are often regarded as having *de facto* or quasi security of tenure. Within this context the continuity and change of the built forms' morphology can be read as a way of communicating certain kinds of tenure – the perceived permanence of the materials and construction can be linked to a perceived stabilization of tenure.

The paper discusses how morphological mapping can help us understand the way in which tenure negotiation operates in informal settlement. It uses *kampung* Sidomulyo and Kricak in Yogyakarta as a case study.

Keywords: built form, mapping, morphology, tenure

1. INTRODUCTION

The UN's estimation that nearly 1 billion people in the world live in urban slums in 2001 (UN Habitat 2003) has frequently been used to remind us that slum and informal settlement[17] are increasingly unavoidable, particularly in the lower income countries. This paper sees informal settlement as a spatial assemblage, emerging as a result of unauthorized tenure acquisition by which built form is employed as a tool of territorial claim.

The process of territorial claim can be massive yet rapid, or incremental yet lengthy. Some informal settlements in South America emerged as a result of planned massive invasion that could take place in one day (De Soto, 1989), while with others, like the riverbank *kampung* in Indonesia, the process took years to initiate. Both types have had impacts on the morphology of the built environment. The continuity and change of settlement's morphology can therefore be seen as a way of reading the process of tenure acquisition and stabilization.

This paper aims to demonstrate how morphological mapping can help us understand the spatial dynamic of informal settlement, and how it links to tenure attainment. The first section discusses the meaning of secure tenure in the context of informal development, and the second looks at the role of built forms in tenure claim and stabilization. The third section discusses how morphological mapping reveals the dialectics of built form and tenure in *kampung* Sidomulyo/Kricak.

2. SECURITY OF TENURE

In his earlier work titled "The Other Path", de Soto contends that informal urban development reverses the traditional development. It begins with the construction of built form and "only at the end do they [tenants] acquire ownership" (de Soto 1989:17). For de Soto, the term 'traditional' means 'formal'. This implies that in 'formal' development the state guarantees security of tenure in the form of legal title prior to the commencement of construction. Furthermore, this view seems more apt to the higher income countries, whereby the strong state control in development allows domination of formal economic and development activities to influence everyday life. In these countries formal development is considered to be 'normal', while informal development is seen as 'abnormal'.

In the lower income countries, however, the capacity of the state to perform such control tends to be weak. Informality often becomes the

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[17] *Slum and informal settlement are two distinct terms frequently interchanged without noticing the difference. Slum is often associated with squalid conditions as a result of serious lack of adequate infrastructure to support decent living, while informal settlement involved lack of tenure and control of planning, design, and construction.*

dominant norm, penetrating many aspects of everyday life, as Jenkins (2006) puts it:

> In lower income countries the 'informal' dominates in almost every aspect of economic and social activity, and the 'formal' is very limited in scope, even within government and higher income groups – in fact 'informal' is normal (Jenkins 2006:86).

Actually the above statement is not meant to characterize 'formal' as 'abnormal'; rather, as Jenkins (2006) suggests, the division of formal and informal is a continuum, not a dichotomy (see also UN Habitat 2003). In the weakness or absence of control by the state, both informal and formal systems co-exist. The informal fills the gap created by the demands that the formal cannot fulfil, such as affordable land for housing and trading. This seemingly more realistic view leads to the question whether or not the attainment of security of tenure should include the granting of legal title in informal settlement, as suggested by De Soto (2000).

The UN defines security of tenure as the state's protection of citizens against forced eviction (Augustinus 2003). De Soto's argument mentioned above suggests that in informal settlement tenure is gained through a gradual non-standard process, which results in various forms of tenure system. These facts tend to be oversimplified by "the widespread designation of all urban settlement processes into formal and informal" (Payne 1997:30), but there are at least six types of tenure acquisition in informal settlement, namely de facto security, official recognition, land rental, occupancy and use rights, communal or co-operative ownership, and customary ownership (Payne 1997:31-34). This paper focuses on the first three, as they characterize the tenure system in *kampung* Sidomulyo/Kricak.

The first, *de facto* security of tenure, is gained as a result of tolerated squatting (Payne 1997). In the cities of Indonesia, the lengthy process of spatial planning has often led to a delay in transforming such planning into regulations, which gives adequate time to the squatters to stabilize their territorial claim by improving their shelter (see for example Khudori, 2000). This improvement is often accelerated by slum upgrading initiatives supported by both local government and NGOs that disregard the issues of legal tenure.

Official recognition, the second type, can be obtained through "default over time, or by the active efforts of the residents, developers, and local politician" (Payne 1997:31). The case study selected for this paper, is an example. A neighbourhood (RT) in Sidomulyo called Lengkong (Figure 1b), obtained administrative authorization in 2005, after almost 5 years of negotiation with by the residents with the municipal government. Although they did not obtain property titles, the KTP (ID cards) granted by the government has enabled residents to access state supported facilities, such as electricity connection and infrastructure upgrading.

The third type, land rental, takes place within the practice of customary law (Payne 1997). Again, this can be seen in *kampung* Sidomulyo, in which residents termed it *Ngindung*, a traditional practice of land leasing by which the landowners allow people to build a house on their land, and live in it for a period of time - it can be more than10 years, usually without written consent. Guinness (1986) observed the common rules in this practice with regard to building materials, that is, the use of less permanent materials such as bamboo and timber.

3. BUILT FORMS AND TERRITORIAL CLAIM

Tenure in informal settlement occurs as a result of territorial claim, which involves the exercise of power. Invasion of vacant state land by squatters usually takes place when the land is governed in a disorderly manner. This lack or absence of a state's power to control property allows squatters to carry out territorial claim. Such a power contestation partially corresponds to what Dovey (1999) termed 'power over', which he defines as "the power of one agent (or group) over another, the power to ensure the compliance of the other with one's will" (Dovey 1999:10). In rapid land invasion by a group of squatters, such as the case in Peru (de Soto, 1989), the power of massive planned invasion by squatters surpassed the state's capacity to immediately react; while in gradual invasion, which is usually carried out by individuals, the process is lengthy, since these invaders arrive separately and tends to be unorganized. Consolidation of power occurs when they reach sufficient population to establish a social network, by which they negotiate for a more secure tenure.

Both models - rapid and gradual invasions - do not see ownership as a pertinent issue in their early stages. What these people are most concerned with is the capacity to control over territory, which conforms to Habraken's notion that "Ownership is not necessarily congruent with control" (Habraken 2000:37). The capacity to maintain control over property ensures one's security of tenure. And in informal settlements, this requires the role of built forms. Squatters demarcate their territory by at least laying out markers then appropriate them until reaching a sufficient stage to dwell. The continuity and change of these built forms reflect the progress and constraints in tenure stabilization, which can be best observed by means of morphological mapping.

4. MORPHOLOGICAL MAPPING

Urban morphology is a study of human habitat, which basically looks at the urban forms in terms of building, open spaces, plot, and street. These elements may be examined through four levels of resolution: building and plot, street and block, city, and region (Moudon, 1997). Morphological change is a result of "a cycle of reaction between form and function" (Conzen 1981:105).

Morphological maps presented in this paper put urban forms in the level of city as well as street and block of the selected case study. Unlike the conventional morphological mapping, these maps look beyond Conzen's notion of 'form and function' dialectics. They use the visualization of urban morphology as a tool to reveal the hidden characters of informal settlement, such as changes of neighbourhood boundary and households' tenure situation. The mapping was carried out through a combination of field survey, aerial photograph review, interview of some key informants, and archival study.

4.1 The case study: *kampung* Sidomulyo/Kricak

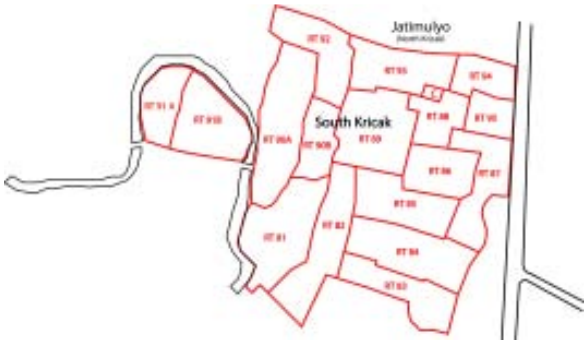
Sidomulyo/Kricak rests upon the bank of the Winongo River in the northern fringe of Yogyakarta, Indonesia. As a spatial assemblage, Sidomulyo/Kricak consists of 4 parts: Atas, Bawah, Lengkong, and Kricak-RT35 (Figure 1). Atas, Bawah, and Lengkong are officially part of *kampung* Sidomulyo, while Kricak-RT35 is actually part of a larger *kampung* called Kricak Kidul (South Kricak - see Figure 2a).

Figure 1. Assemblage structure of the case study

The term ‘assemblage’ used here is borrowed from the work of Deleuze and Guattari (1995), which was further developed by DeLanda (2006) into assemblage theory. In short, they describe assemblage as a whole formed and characterized by relations of parts. This paper reviews the assemblage of Sidomulyo/Kricak in terms of the historical process of its formation, recent tenure status, and perceived permanence of building construction.

4.2 History of the assemblage formation

The formation of the spatial assemblage of Sidomulyo/Kricak can be traced back to the early years after Indonesian independence (1945 onward), when Bawah and Lengkong did not exist. The whole area of Atas was part of a larger kampung called Kricak Kidul (Figure 2a), with a different administrative subdivision following the implementation. of RK (*Rukun Kampung* – Neighbourhood Association) administrative system to replace the pre-independence Japanese Azazyookai neighbourhood system (Suwarno 1990).



(a) Before 1989

(b) 1989 - 2000

Figure 2. The changing of neighbourhood administrative assemblage before and after the implementation of the RW administrative system: (a) Subdivision of RK Kricak Kidul before 1989; (c) Subdivision after the implementation of the RW system in 1989

Meanwhile the early 1960s saw the rise of communism in Kricak Kidul, as the number of PKI (*Partai Komunis Indonesia* - Communist Party of Indonesia) members living in Kricak Kidul was among the highest in the city (Lont 2002). Yet at the same time there was a strong perception among the citizens of Yogyakarta that Kricak was the home of gamblers and criminals. The failed coup by PKI in 1965, followed by the raid on PKI affiliates, led many residents of Kricak Kidul to flee temporarily. But the raid on PKI members in 1966 also caught about 1500 homeless (*gelandangan*) and beggars, who were then placed in a barrack compound located on the site of now Bina Karya Social Rehabilitation Centre (Figure 3). The military forces built this facility by using non-permanent building material such as bamboo for the main structure and partitions, and roofed it over with sugarcane leaves.

In 1976 the government decided to demolish this barrack partly because of financial difficulties (although a few years later a social rehabilitation centre named Bina Karya was established on the same site). The tenants were coercively evicted; most of them decided to move into Atas, while a few opted to reside in the area now Kricak-RT35 (see Figure 45.3), and others moved elsewhere, including joining the transmigration program.

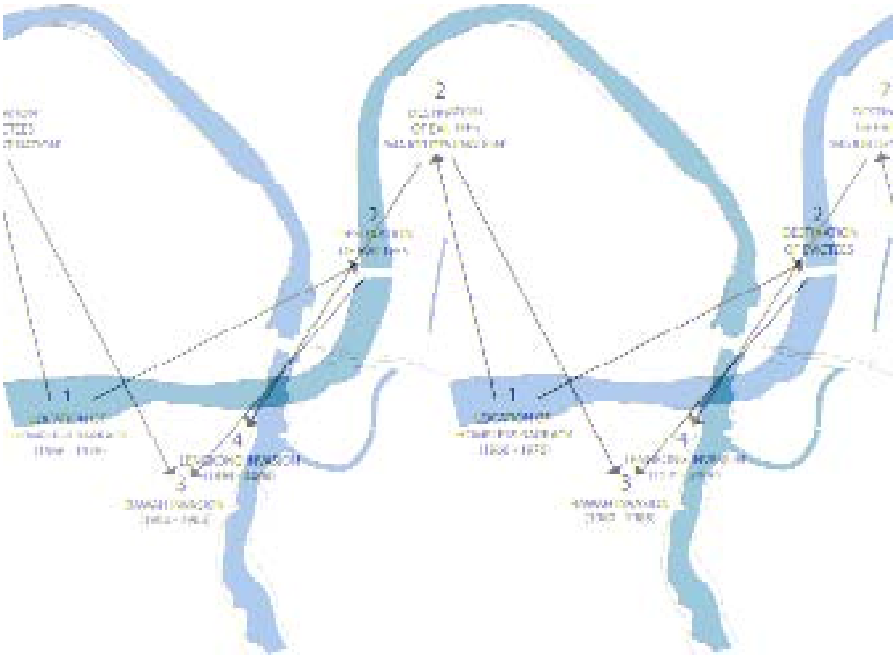
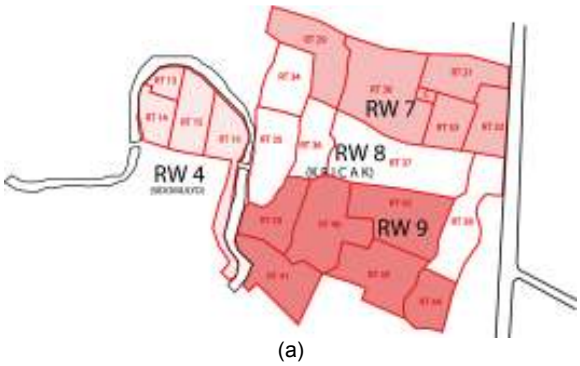


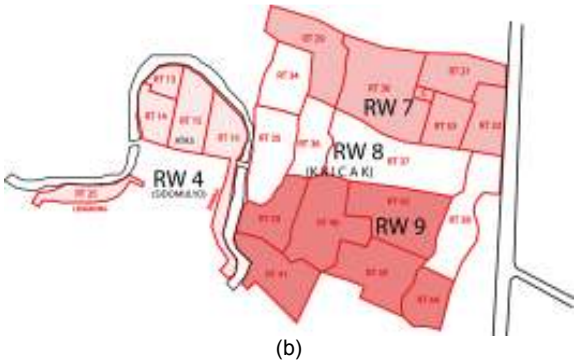
Figure 3. The location of barrack and pattern of movement of former barrack tenants after the 1976 barrack demolition.

The influx of these former *gelandangan* had added to the existing social problem, and at the same time created a new problem of spatial density over Kricak Kidul. Those who chose to reside at Atas were actually responding to the persuasion of two Atas landlords, who offered them vacant lands for *ngindung* (lease land but self built shelters). These evictees collectively submitted their compensation money to these landlords to pay the rent for the first few years. In general, they divided the plot into two sizes, 3m x 6m and 6m x 6m. The former cost Rp. 1,500 per year, and the latter Rp. 3,000. The amount of compensation received from the state was Rp. 10,000 for a family and Rp. 5,000 for a single tenant. The current stage of the tenure situation at Atas after more than 30 years of such a land leasing initiative is discussed in the next section.

In the early 1980s Suharto's administration implemented a new neighbourhood administrative system called Rukun Warga (RW), which replaces the former RK system. This new system was implemented in Kricak in 1989, while at the same time the municipal government decided to split Atas from the existing Kricak Kidul, and subsequently merged it into the neighbouring kampung called Sidomulyo. Since then Atas and its extension (Bawah and Lengkong) have been colloquially called Sidomulyo



(a)



(b)

Figure 4. Administrative authorizations of Bawah in 2000 (a) and Lengkong in 2005 (b)

Meanwhile, in the same years, some former evictees who had been settled at Kricak-RT35 began to cultivate the area of Bawah. They planted corn, chilli and cassava for their daily consumption. Their agricultural invasion was soon followed by the gradual influx of the former evictees who lived at Atas (refer to Figure 3). These people did not cultivate the land; instead they gradually subdivided the land for informal property speculation. By mid 1980s the agricultural activities vanished, replaced by housing development and land speculation, which continues today. In the early 2000s, this area was administratively authorized, and became an extension of RT 16, one of the RTs in Atas (Figure 4a). All of the 19 houses at Bawah are now inhabited by people coming from outside Sidomulyo.

While Bawah received administrative authorization, some former barrack tenants who lived at Atas began to subdivide the area now called Lengkong (Figure 1 and 6). The reason was the same as that with Bawah, that is, property speculation. But they did not start with land cultivation; instead they directly subdivided the land and laid foundations or constructed temporary shelters to attract buyers. By 2003, the settlement had been clearly structured and people began to live there permanently. The neighbourhood administration was temporarily attached to RT 14 until the granting of administrative authorization in 2005, which made Lengkong a separate administrative area from Atas, labelled RT 25 (Figure 4b).

4.3 Tenure status and the perceived permanence of building construction

Field survey of the relationship between property and tenure in the whole Sidomulyo/Kricak has resulted in at least 9 tenure categories, depicted in Table 45.1. Because of page restriction, this paper presents only morphological mapping of Atas and Lengkong.

Based on the notion that security of tenure is a state assurance for protection against forced eviction (Augustinus 2003), Table 1.1 shows that category 1 has the highest level of tenure, while category 5 has the lowest. The absence of category 1, 2, and 3 over Bawah and Lengkong indicates the absence of formal tenure in these neighbourhoods. How does the perceived permanence of building materials link to this fact?

Table 1. Tenure category within Sidomulyo/Kricak

Category	Description	Location of occurrence (A= Atas; B=Bawah; L=Lengkong; K=Kricak-RT35)
1	Land/house formally owned - occupied by owner(s)	A, K
2	Land/house formally owned - occupied by renter(s)	A, K
3	Land formally owned - leased to renter(s) who self-built the house	A, K
4	Land/house informally owned - occupied by owner(s)	A, K, B, L
5	Land/house informally owned - occupied by renter(s)	A, B, L
6	Public/community building on state land without agreement	B, K
7	Public/community building on private/endowed land with agreement	A, K
8	Vacant land formally owned	A, K
9	Vacant land informally owned	B, L

There are three common categories perceived by the locals with regard to building materials of superstructure (wall and partition), that is, permanent, semi permanent, and temporary. Brick and concrete blocks are perceived as permanent, while half brick - half bamboo is considered as semi permanent. A building wholly constructed of bamboo or timber is often perceived as temporary. Based on this category, Figure 5 presents mapping of tenure status and building materials on Atas and Figure 6 on Lengkong. Figure 6 shows that despite the informal tenure of all properties over Lengkong (category 4 and 5), all houses are made of permanent materials, either bricks or concrete blocks, whereas the domination of formal tenure over Atas (categories 1, 2, and 3) does not seem to guaranty those who fall within category 3 (renter who self-builds the house) the possibility of upgrading the house into a more permanent one (Figure 5).

Figure 5. Atas/Kricak RT35: shaded blocks are building of category 3 (see Table 1) combined with 'temporary' building materials category.

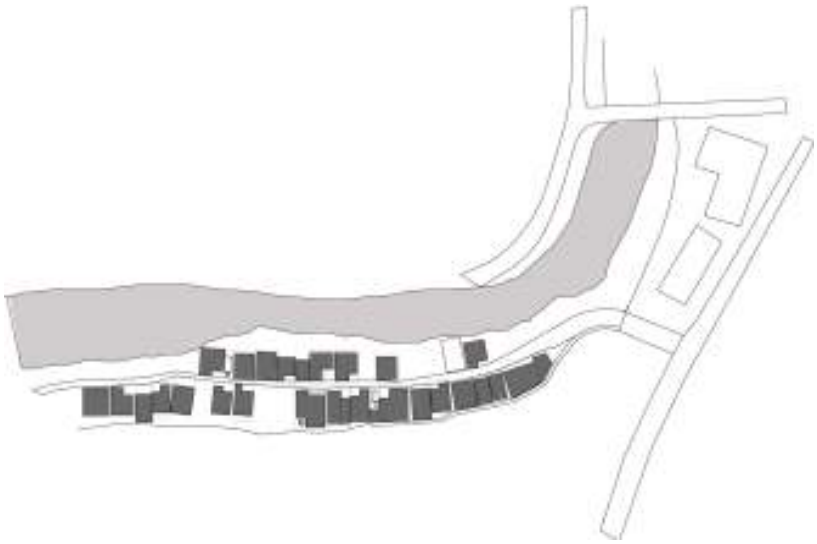


Figure 6. Lengkong: shaded blocks are buildings of category 4 (see Table 1.1); all buildings are constructed with permanent materials (bricks/concrete blocks)

5. CONCLUSION

The conventional UN definition of secure tenure, which puts the state as people's protector against forced eviction, seems valid only within the state's continuing presence in territorial control. In the absence or lack of state's control over a territory, the squatters establish their own way of perceiving the meaning of secure/stable tenure.

Morphological mapping of the blocks and streets of the case study helps us to see the tendency of Lengkong residents to invest in house construction using materials with a high sense of permanence (brick and concrete), albeit with the extra-legal status of their sites. This shows that the state apparatus is not seen as a serious threat to their existence because there is no agreement between them; yet the state is not visible in their everyday life. In contrast, the continuity of temporary materials used in renters' housing at Atas links to the (unwritten) agreement made between these renters and the landlords, as well as the continuing presence of these landlords in renters' everyday life. Thus, the close proximity to agents who have a clear and present power in controlling the territory contributes to the insecurity/instability of tenure.

Mapping of the continuity and change of the administrative entity of Sidomulyo/Kricak suggests that the positive progress of territorial authorization is a result of non-verbal negotiation. The authorization of Bawah and later Lengkong are examples of how a solid social network of residents and clear spatial order have contributed to state decision in officially recognizing the neighbourhood as part of the formal governance system, despite no title being attached to the land. Given the state's weak control over planning, maintaining the absence of formal title in this settlement is probably better for the time being rather than granting formal individual title, as the latter might accelerate property speculation, which may only give benefit to affluent groups.

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2 - 13

Settlement Environmental Adaptation on Deteriorated Area at Genuk Industrial District Semarang

Parfi Khadiyanto[18]

ABSTRACT

A particular living area around Genuk industrial district of Semarang city has been renowned for its bad environmental conditions due to intensively increasing sea water tide overflow (popularly known as rob inundation) to the area every year. Many of the building do not even meet the lowest of standards. Due to the salinity of sea water overflowing to the area, things from metal and electronic appliances are easily damaged. Regardless of this condition, the occupants of the living area do not seem to have the desire to leave the location. These people rather opt to adjust their surrounding environment to meet their need.

The paper will try to explain how the occupants of the living area around Genuk industrial district of Semarang city respond towards the degradation of the living environment around them due to rob inundation, what they do to adapt and the factors that cause them to do such actions of adaptation. Moreover, this paper will also try to reveal changes in the living environment to preserve the previously existent occupancy.

To gain the knowledge of the occupants' response towards the continuous degradation of their living environment, a comprehensive interview was undertaken, and as for factors that influence the occupants to take adaptive actions, questionnaires were deployed to gather data. The technique of analysis of the research used qualitative technique supported by quantitative technique with factor analysis method. This technique is widely used on social research and analysis for its simple mechanism and yet revealing

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nature. The analysis was carried out by devising variables into categories and parameters based on their quantity and their correlation.

To reveal the environmental changes supporting to preserve the previously existent occupancy, a physical survey was carried out by visually observing morphological changes in the surrounding environment and then recording the changes etnographically through track record of changes by interview and sketch/imaging tools. This paper is expected to found a new theory on the response and factors influencing that response of occupants in living environment with deteriorating conditions (in the case of this paper, the degradation is caused by *rob* inundation). This paper is also expected to reveal the kind of society who has high initiative to work together to create adaptation towards a deteriorating living environment, so that when aids are to be given in these deteriorating environments, it may be used to the full extent by selective grant.

Keywords: environmental deterioration, Semarang, settlement, society responds

1. BACKGROUND

Throughout the history of many cities, housing issues has always been a major problem. Experience often shows that this problem is prominent in most older as well as many new modern cities. The availability of qualified housing facilities in cities is often limited, particularly for people with lower income, whereas the demand of housing increases from time to time as the city expands and develops. The problem is often worsened by increasing demands for housing facility maintenance, the shortage of housing availability and its cumulative shortage. Housing was one of the basic necessities of mankind. A house not only serves as shelter, but it also serves as a place at which motivation of life improvement may thrive. In day to day life, issues in living areas and housing complex varies according to their occupants. Naturally, different type of occupants often possesses different kind of problems. As an example, household with lower income may find it difficult to find decent housing near workplaces, particularly in urban areas. Thus, different type of occupants may come up with different way of coping with such situations with whatever resources they may have, whatever way seem to be fit and whatever social backgrounds that may influence their view.

Housing preferences often largely depends on economic factors; that is, people with lower income often choose housing areas near their workplace for the sake of efficiency, while they may sacrifice comfort by doing so[19]. This

[19] *Budihardjo, Eko (ed.), 1998, Sejumlah Masalah Permukiman Kota, Penerbit Alumni, Bandung*

view is in line with that Maslow's, whose opinion was that people from lower economic backgrounds put forward their basic needs than their self-actualizations[20]. Those thoughts confirm the fact that there are many housing areas for low-income labors near factories and companies.

An industrial zone of 100 acres may grow a workforce density of 7500 people, with the multiplier effect of 1. This multiplier effect means that 1 worker possibly brings 2 more followers into that area. In conclusion, an Industrial zone of 100 acres may have 22.500 people in it. As such, many settlements will be inevitably created (both planned and unplanned) to meet the need for effective housing of workers in the area[21].

The development of urban fringe areas into industrially oriented areas is a common phenomenon. Semarang as a major city, whose hierarchy position is highest among cities in Central Java province of Indonesia, is also a part of that phenomenon. Some urban fringe areas of the city has been industrially developed due to the city's extensions programs. A number of these developments even reach areas outside the municipal government's administrations, which are often referred to as sub-urbanization process[22], a phenomenon that commonly occurs in major metropolitan cities. These areas are also known as *extended urban region* or *suburban*. Developments of urban extensions in major cities are mostly characterized by *sprawl* or *leap frog* developments, featuring mainly on linear development of areas, which are often not in conjunction to one another, according to transportation routes. Factors that influence such developments are the development of housing complex by developers or the development of urban fringe industrial areas.

In Indonesia, cities with more than one million citizens may be defined as a metropolitan city. However, the true definition of metropolitan city lies in its functionality. In industrial countries such as United States of America, England and Canada, cities with only several hundred thousand citizens have already defined as major metropolitan cities[23]. A metropolitan, then, is defined by these characteristics[24]:

a. Many occupants with high occupancy density within a vast region, and highest occupants in comparison to the areas surrounding it within the administrative influence.
b. Meet the standard economic scale requirements for major commerce and industrial services.

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[20] *Joyce Marsella L, 2004, Arsitektur dan Perilaku Manusia, Grasindo, Jakarta*

[21] *Hasan Poerbo, 1999, Lingkungan Binaan Untuk Rakyat, AKATIGA, Bandung*

[22] *Hughes, 1974, Suburbanization Dynamics and the Future of the City, CUPR, Rutgers, New Brunswick*

[23] *Bourne and Simmons, 1982, Internal Structure of the City, Oxford UP, New York*

[24] *Rondinelli & Rudlle, 1978, Urbanization and Rural Development, Preager Publisher, New York*

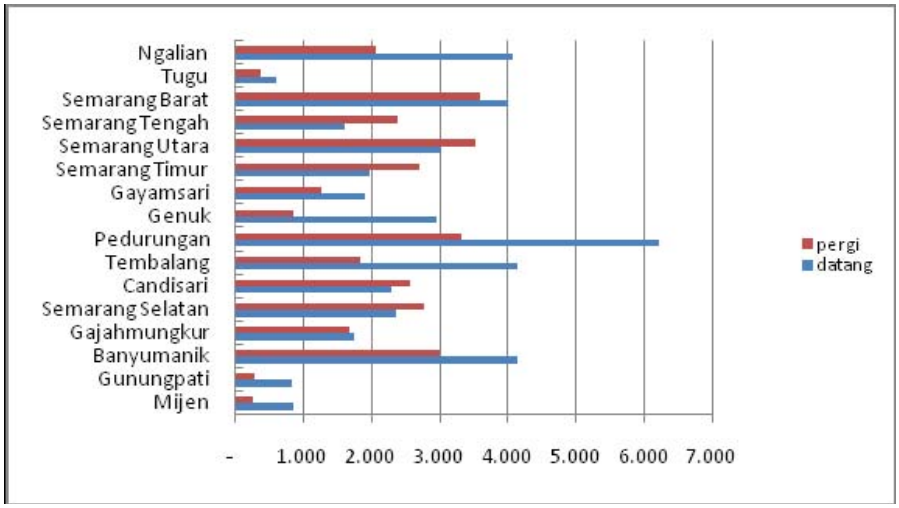
c. The hub of transportation and communication with adequate or more facilities.
d. The centre for professional and commercial services.
e. A potential market with strong consumption capabilities, above the national rate.
f. Becomes a centre of interest for foreign investments, largely due to the factors aforementioned.

Genuk and other districts of Semarang have undergone developments due to the extensions of Semarang city. The development of new industrial and real estates, however, has in fact reduced the self containment capability of the area. This newly developed real estate has high dependency towards the city centre, whereas the industry in area could not meet the job vacancy requirement for the occupants in the area, since people who live in Genuk area mostly do not also work or has anything to do with the industry there. Meanwhile, the development of new real estate draws new services from the informal sectors by demand of the new occupants in the area. Thus, many spontaneous settlements (*unplanned*; organic) or in other words, the old settlement is getting more and more crowded by the new comers. Those who live in Genuk area are mostly not related to the industrial activity in the area and often choose to live there due to the easy access towards city centre. Thus, there is a great interaction between Genuk area and Semarang city centre in terms of transportation.

The concentration of Genuk area's situation is quite contradictive. In one hand it is designated as sub-urban and industrial area. In the other hand it is also demanded by its occupants to provide housing, health and educational facilities. This situation will create an uncomfortable atmosphere of living, educational and health treatment activities due to the brisk and harsh environmental condition created by the heavy industries in the area.

Demographic issues and the declining living quality has become a global issue, and so apply to the city of Semarang. The environmental issues in Semarang could be tracked back as far as 20 years ago. The issue is characterized by the rise of overflowing sea water level (*rob* inundation), quantity and quality deterioration of ground water and surface water and increasing air pollution. The most prominent environmental issues in Semarang could be seen in Genuk industrial zone. Water from shallow wells in this area is no longer consumable. In wet season, the water appears to be green and often smells fishy and in fry season the water appears as black with characteristics comparable to that of liquid industrial waste. The most prevalent issue in the area is the river water; it appears to be green or white and release strong smell throughout the year. Due to this fact, the location is perfect for the research of this paper since the occupants choose to stay despite the harsh environmental conditions. The occupants opt to adapt towards this harsh environment by communal means rather than individual means.

Overwhelming environmental issues in the area do not seem to prevent newcomers to come and settle in the area or encourage the existent occupants to move out of the area. The comparison between those who come into and go out from Genuk is recorded as the hisghest among other districts in Semarang (Comparison for Genuk = 3.41, as for all Semarang = 1.31). This figure indicates that Genuk is still desirable to many people.



Sources from: Semarang in Figure, 2008.

Figure 1. Graphic of Proportion between In and Out Population in Semarang on each Distric – 2007

Environmental issues is the biggest issue for Genuk district and its surrounding areas (including Sayung district which is within the administration territory of Demak city, a border between the municipal territory of Semarang and Demak). One of the major cause of the prevalent environmental issue in the district is annual rob inundation phenomenon. During this rob inundation, industrial waste is carried over to the occupants' houses by the overflowing sea water.

According to Detail Planning of City Zoning (RDTRK), land functions in the BWK (City Zone) IV (Genuk District) are assigned mainly for industrial and housing purposes. The southern part of the district is to be used as housing zone whereas the northern part is to be used as industrial zone.

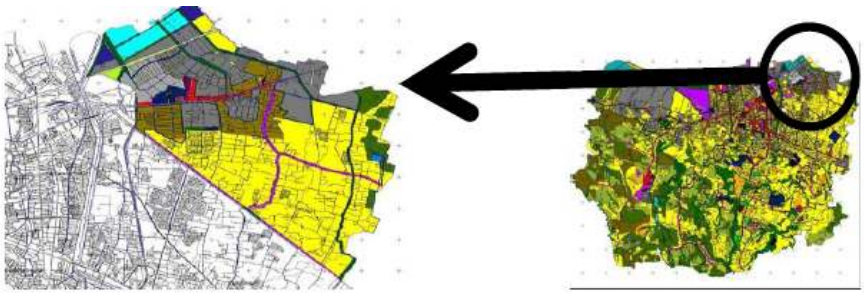


FIGURE 2: GENUK DISTRICT LAND ZONING
Source: RDTRK BWK IV Year 2000 – 2010

The occupants of Genuk district and its surroundings feels that rob inundation phenomenon has become a threat from time to time. The overflowing sea water has long penetrated the wells (deep wells) in the area which was a source of consumable water for the occupants. It also confirmed that 10 years ago, this phenomenon in non-existent in the area. At present, the occupants of Genuk industrial zone have to buy purified water for their daily fresh water consumption. The phenomenon of rob inundation comes once every month with overflowing water level up to 30 or 50 cm above the ground. The occupants take various adjustments to cope with such conditions. Roads, front yards, base floor are heightened and for some houses are extended to two story houses.

The paragraph above gives a brief description of the main issues that occupants of Genuk industrial district are suffering from. The point is then to try and survive in order to continue the long existent occupancy in the area.

Figure 3: WATER SOAKED SETTLEMENT
In many neighborhoods, dams are made from piles of sand sacks and, in neighborhood of higher income occupants, stone block piles along ends of roads or streets connected directly to ponds. This is the visual image of the water soaked settlements in the district, overflowing sea water puddle are often seen in front yards that are in the lower level than that of its related streets or roads.

The issues identified in Genuk district and its surrounding areas are:

1. Genuk district and its surrounding areas suffer from the overflowing sea water tide (*rob* inundation)
2. The occupancy in the area is quite prevalent, thus making it difficult to change the occupants' mind to move out from the area.

As such, the occupants of Genuk district must live and adapt with the routine rob inundation phenomenon with increasing intensity along with the land subsidence process around the area.

From the issues identified above, the questions raised, then, are:

1. How do the occupants cope with the environmental issues around them? What actions do they take? What are the main considerations of such actions?
2. What sort of building architecture and morphological change will take place?

The objective of mapping the morphological change of environment and settlement condition suffering from constant deterioration to preserve the existent occupancy are:

1. Identification of a pattern or typology that is desirable by the society to cope with flood or other environmental deterioration.
2. A more comprehensive understanding of the situation by the government, which will eventually lead to policy forming to give aid to society suffering from other environmental deterioration.

2. OCCUPANTS' RESPONSE TOWARDS DETERIORATING ENVIRONMENTAL CONDITION.

A number of experts in psychology agrees upon the notion that stimulus (S) that comes from the external environment and the response (R) given to that stimulus by the corresponding subject possesses direct relation. Thus, R changes as S changes. If S is a pleasant one (reward, compliment), then R should also be positive (more motivation, increased sense of belonging). On the other hand, if S is unpleasant (punishment), then R would most likely be fear, hatred, denial and so on[25]. Based on this assumption, a theory states that to obtain the desirable R, one simply needs to change the S. This S-R relationship theory is also called the periphery theory, since it does not account the undergone process of the subject in his/her sub-conscious state of mind[26].

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[25] *Sarwono, Sarlito Wirawan, 1992, Psikologi Lingkungan, Rasindo, Jakarta*
[26] *Ibid.*

The event in which sea water tide overflows too far inland is by no means a natural event since it is not suitable to the common ideal condition. Due to this fact, stress is most possible among the occupants in the area suffering from such phenomenon. When this phenomenon happens routinely, then there will most probably be some kind of adaptation from the occupants. This means that repeated events in a certain area will create an increasing consciousness of its occupants and as such those occupants will inevitably evaluate themselves and the environment around them. The unsatisfying result of evaluation (standard result would be a water-soaked free settlement) and repeatedly happening stress from deteriorating environmental condition lead to cumulative dissatisfaction, coupled with incapability and exhaustion, which will end up in the self-degradation within the society that accepts the environmental deterioration (rob inundation) as something that is common. Such process and action of acceptance is referred to as the cause acceptance. With cause acceptance, the occupants will adapt to the rob inundation phenomenon every time it occurs. Such adaptation process may also be caused by the occupants' assessment that view the situation as something that does not really harm them or matters that are important to them. Social and economic backgrounds may also play an important role here. If housing in a rob inundation free areas are unaffordable, then the most probable action is adaptation towards the environmental condition. For occupants who are more economically capable, adaptation might include heightening house levels to meet the minimum desirable standard; to not have the sea water inside the house. Such adaptation accounts to a form of environmental adjustment, however such action is mostly self-interest based. Thus, people who have accepted their environmental stress as a common condition may have little or no stress level at all. On the contrary, for people who retain the view of a rob inundation free ideal environment, slight and not harmful overflowing sea water may cause significant stress level. Other than stress, health related complaints from the occupants in areas suffering from rob inundation in Genuk district include headache, inability to rest easy at home, exhaustion, low spirit, tremor and insomnia along with all psychological effects that comes with them. Only a small portion of occupants often complains about their physical condition related to their housing areas. A brief description of the finding is shown in the following table:

Table 1: Precentage of physical and psychological complains in occupants suffering from rob inundation (OVERFLOWING SEA WATER TIDE).

Category	No of Physical Complains	No of Psychological Complains
Very Often	-	2.38 %
Often	7.14 %	2.38 %
Sometimes	23.81 %	23.81 %
Only in Certain Condition	47.62 %	42.86 %
Seldom / Never	21.43 %	28.57 %
TOTAL	100 %	100 %

Taken from: Zulriska Iskandar (2001)[1]

3. RESEARCH FINDINGS

The definition of housing environment may be viewed as container and its content. The changes occurring in the container depends largely on the changes of the content within it, and as such, to reveal changes in the container, it is important to gain knowledge of the content inside the container beforehand. Thus, to reveal the changes in housing, we must first gain knowledge of the people living inside the house.

Each individual has their personal standard in assessing their housing environment. This personal standard plays a major role in determining whether someone will leave a housing environment or stay and cope with all the environmental defects.

Most people living in Genuk district are migrants from outside Semarang city with plural characteristics. The characteristics differences here are the difference in educational background, type of live hood and socio-cultural backgrounds which often form different views.

The survey shows that most respondents are quite comfortable living in Genuk district despite its distance to the industrial area and continuous rob inundation phenomenon. On the other hand, some feels uncomfortable and others stand in the middle opinion.

Analyzed variables are 15, but only 5 of them are significant as shown on table above. Variables that significantly influence the occupants' view on Genuk's accommodative ability are income, occupied building status, conflict in housing areas, duration of occupancy and socio-communal relationship. Among the five major variables, income has the most influence towards the occupants' view. Income influences the view in terms of the accessibility of Genuk district.

There are some typologies of evolution of the environment process that are depends on location and job of occupant. From location side we have two major groups, which are old kampong and new settlement (build by real estate developer), meanwhile on new settlement we have also two groups, first is the one that near embankment area and the other one is the area that far from it. Schematically described as follows:

Kampong/ village	Closed to embankment
Settlement build by real estate developer	Closed to embankment
	Far from embankment

On kampong/ village areas, physical changes that happened are road heightening, resulting from sand bags that are pilled up then buried with soil and are flattened, so the vehicles could cross upon it. The road is functioned as the dike of the flood.

For the settlement near from the embankment, environmental changes that happened are house heightening, dike development, and road heightening. Different from previous case, road heightening will be done if they have sufficient fund, as it became the last priority. Meanwhile, house heightening done individually, so we may see the houses height differences between each other. Some are very low, due to road heightening, while the house height has not change yet.

The other group, the far from the embankment settlement, permanent road heightening became their first priority, usually using paving block. It makes the road dry faster, particularly when it drowned by water or when some flooded area are on to it. Location adjustment looked better on this site, good reforestation also.

Therefore we may conclude occupant majority from those three typologies as follows:

Location of Settlement	**Sub Location**	**Occupant**
Kampong/village	Closed to embankment	Fisherman majority
Settlement build by real estate developer	Closed to embankment	Industrial Labour majority
	Far from embankment	Civil Governmnet Officer majority

The conclusions are the stronger society economic background, the more priority on road quality improvement, especially on road heightening using good materials and method. For the low continuum income rates society area, they usually chose specific kind of improvement type, which is house heightening. It was all because they could not afford to move out. Besides, sale price of these houses are very low, impossible to barter like selling house for buying another new one. That is why their only option is fixing their house so the flood won't get in to their yard nor their house anymore.

And for the fisherman groups, because they used to face the flood, the most important thing for them is simple, as long as their house safe from the flood, any kind of situation will be fine. About their house's position becoming lower than the road is not a big deal for them.

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2 - 14

Evaluation on Embodied Energy and Building Cost of Low Rise Apartment Design for Low Income in Surabaya - Indonesia

V. Totok Noerwasito[27]

ABSTRACT

The Low rise apartments for low income people have been built in Surabaya in recent years. They have 4 storeys and many rooms, its dweller are all small trader. Because projects use the budget from government, the buildings are designed to consider costing of construction, without consider to embodied energy material. As a result the buildings are not optimal in embodied energy building and building cost.

At present, because there are global warning problems and crisis of world energy, the embodied energy building is very important for building design, because it can control usage of energy in relation with natural source, especially fuel fossil. That is part of sustainable design concept.

This paper describes research about: difference of embodied energy of wall building and building cost between brick, corn block and light weight concrete in low rise apartments; optimal of embodied energy and building cost; and also it discusses about what factors which causing there is the difference. The findings of research are light weight concrete wall material is the best material for building wall, apartments for low income in Surabaya have not still optimal construction design, and the sustainable building is cheaper than building without use this concept.

Keywords: building cost, embodied energy, low income apartments, sustainable, wall.

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1. BACKGROUND

Many Low rise apartment for people with low income have been built in cities Indonesia, they are called rusunawa, or rental apartment. These apartments are executed with use budget from government, so that budget of building construction is most minimum cost. Possibility building that happened is not attention to environment, namely usage of construction material which low energy.

Taking care of environment is very important, because environment has an effect to condition of nature for future generation. Construction material is one of cause factor to decrease source of world nature. 25% forest wood, 40% stone, krikil utilized for construction per annum (WRI 1998, Ken Yeang 1998). In general, buildings in the world consume 16% water and 40% world energy (Dimson B.1996). From these data, forests represent primer source of construction material. Therefore elementary materials of substitution needed to avoid attenuating of nature, especially wood coming from forest.

Effect of the problem environment, next generation cannot enjoy the condition of nature like in this time. Something else related to disaster in many regions, namely: landslide disaster, floods which disaster often happened because there are of wild hewing without good management.

Low rise apartments for people with low income, generally use brick wall or hollow block wall. Brick wall is material which utilizes high energy for process production; this process will increase energy of building, so the building has high embodied energy.

Possibility materials which can be used as wall materials are brick, hollow block and lightweight concrete. These materials have different embodied energy unit, and also the cost of building.

Apartments for low income people must comprise low embodied energy building and low cost building construction. For this problem, building evaluation needed to identify it.

2. APARTMENT FOR LOW INCOME PEOPLE

2.1 Apartment for Low Income People in Surabaya

In Surabaya, apartments for low income people use hollow block wall and brick wall and use concrete frame as building structure. The buildings include 3-4 storeys, corridor with wide 2 m and rooms with dimension 3 x 6 m. Buildings also have collective kitchen and toilet, but some apartment have privacy toilet. The form of apartments is non compact form with sun shading to keep away from direct sunshine.

This research uses 3 apartment as building samples, these samples are Sombo apartment, Dupak Bangun Rejo apartment and Wonorejo apartment. All Buildings use hollow block wall at exterior and interior. Plan of samples can be seen in figure 1, 2 and 3.

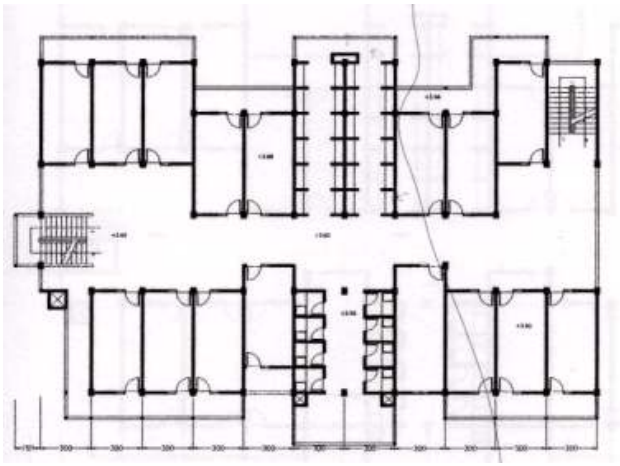

Figure 1. Plan of Sombo Apartment

Figure 2. Plan of Sombo Apartment

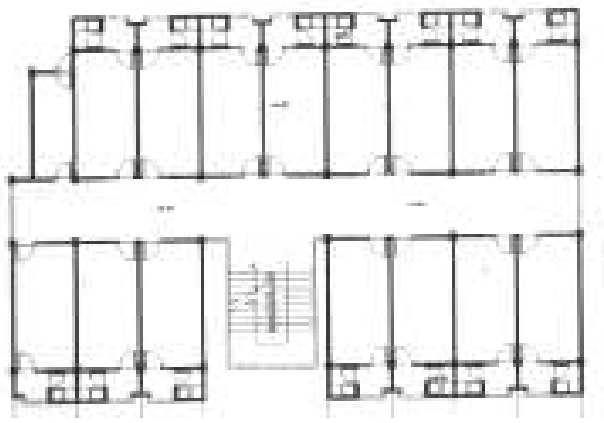

Figure 3. Plan of Wonorejo Apartment

2.2 Square of Buildings

Square and number of rooms are very important to identify square of buildings. The large square of building is building which has many rooms. The different of building square of samples can be seen in figure 4.

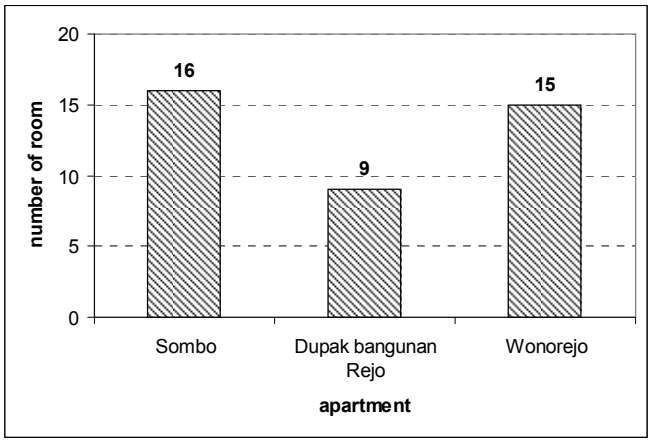

Figure 4. comparisons square of building samples.

Figure 4 shows number of room of Dupak Bangun Rejo apartment has minimum room; so that apartment has least building square. Sombo apartment has amount rooms which larger than other apartment, its building square is maximal.

3. EMBODIED ENERGY

3.1 Embodied Energy Material

According to Olgay, Kahu, Guerero (2000), effect decreasing effect natural sources and forests, study about energy embodied become world issue in this time. Energy efficient method and environmental friendly at construction material which using production process, representing way out so that public can design better the method in construction material at building construction and its environment where they life him..

According to John Amatruda (2002), traditional construction material evaluate and select building pursuant to performance, cost and aesthetics of building. At the present, many parties wish the existence of better environment effect of building construction, namely conduct conservation to natural source and quality air condition in room. According to Petrosian [2000], Embodied Energy material is total energy which is used at step production process. Step production process material embodied energy is starting from raw material, processing, molding and draining till construction and maintenance.

Embodied energy material have standard pursuant to weight, volume or square of material, and every years it renewal as according to progress of production process technology and construction. Following is some material data (Lawson, 1996 Baird and, 1997).

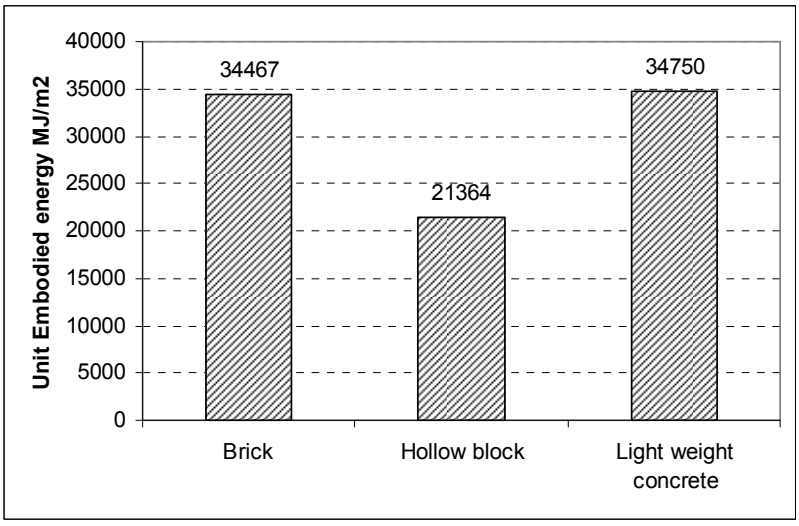

Figure 5. Embodied energy per unit of some materials

3.2 Embodied Energy of Building

Building assumed to have low embodied energy, if the building has lower embodied energy building. Total embodied energy is the amount of total embodied energy from each building element. Embodied energy per m^2 building is comparison between total embodied energy elements with total square of building floors. Building with small floors square always does have not lower embodied energy building, and also building with big floor square always does have not higher embodied energy per m^2 building.

The all buildings sample in this research have energy embodied building which is different, although the buildings have same material type. Difference of building samples is square of building floor and building design which are different. Following embodied energy per m2 of building samples (figure 6).

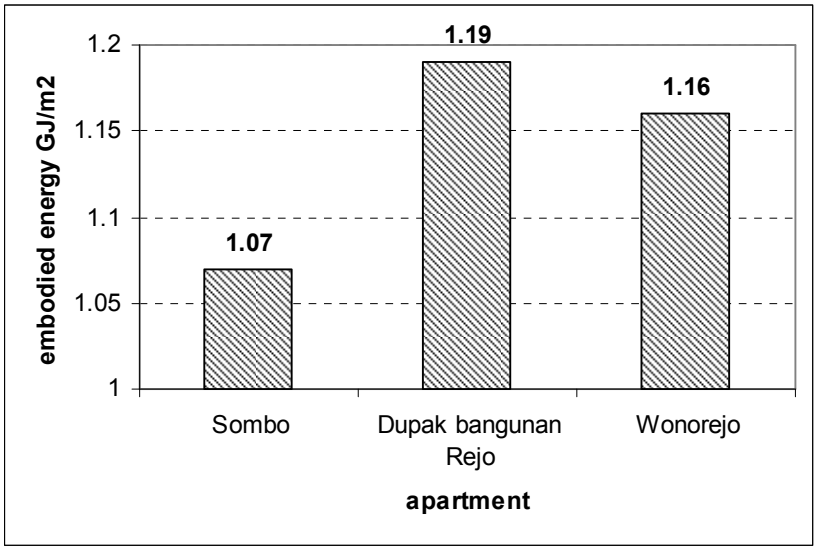

Figure 6. Embodied energy of building samples

3.3 Embodied energy building with different wall material

This research uses materials variable for identify embodied energy of building samples. Wall material variable are used mainly red brick, hollow block and light weight concrete. Following is energy embodied building (figure 7).

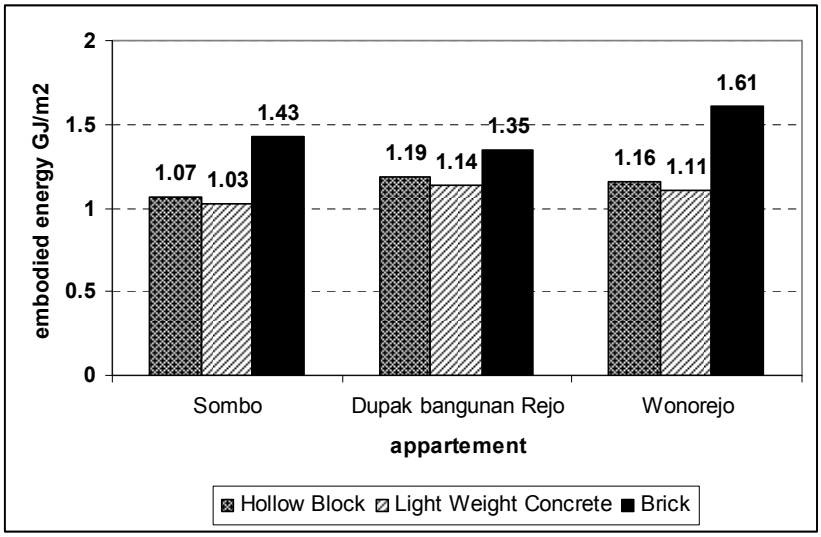

Figure 7. Embodied energy of building samples with different materials

Embodied energy of building simulation to all samples is showed by figure 7, each sample has value of embodied energy which is different. Building with light weight concrete wall represents the lowest embodied energy building samples. Building with brick wall represents the highest embodied energy building. Sombo apartment with light weight concrete wall represents building which is lowest embodied energy.

4. COST OF BUILDING WALL

Construction cost of building wall utilized in this research is calculation of cost material in Surabaya. Difference of cost between materials is influenced by transportation cost from area produce to project site, and produce cost material covering fuel cost and raw material cost. Following is building wall construction cost (figure 8).

Figure 8 shows cost of building wall. Hollow block represents high cost building wall, because it utilizing cement and sand as raw material which represent high cost material. Red brick have high cost of production process, because it uses combustion process. Light weight concrete represents cheapest materials, because it is not solid, thick material and small volume, so that cost of raw material is lower.

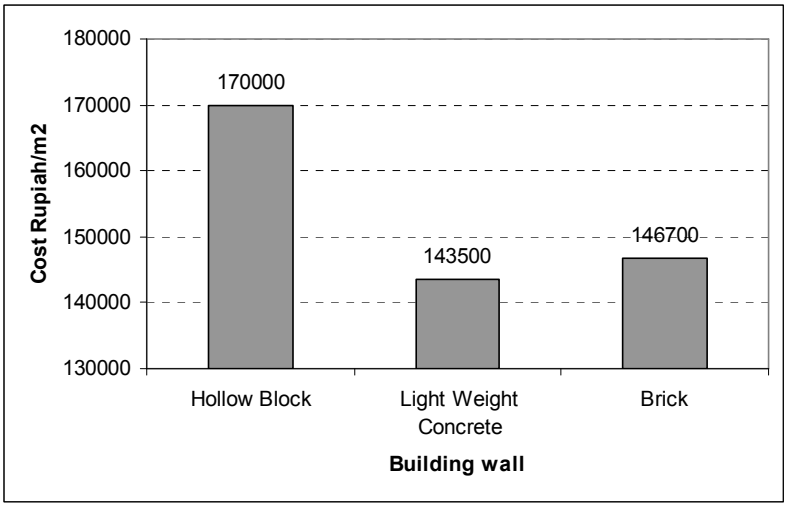

Figure 8. Building wall cost per m^2

5. OPTIMAL TO COST AND EMBODIED ENERGY BUILDING

Ideal Apartment is apartment owning optimal to embodied energy and cost of building. In this research cost of building is supposed by cost of building wall, because the wall represent variable of research.

Figure 9 shows situation of embodied energy of building samples with different wall materials. Buildings with light weight wall concrete represent buildings which have lower embodied energy and wall cost. Buildings with hollow block represent building which own lower embodied energy but its cost of building wall is higher than other samples. Buildings with brick wall have lower cost of building wall, but its embodied energy is higher.

Sombo apartment with light weight concrete wall has optimal to embodied energy and cost of building wall, although the building has larger building square than other samples.

Embodied energy and building cost of building samples are different, because there are differences in building design, namely in floor and wall square.

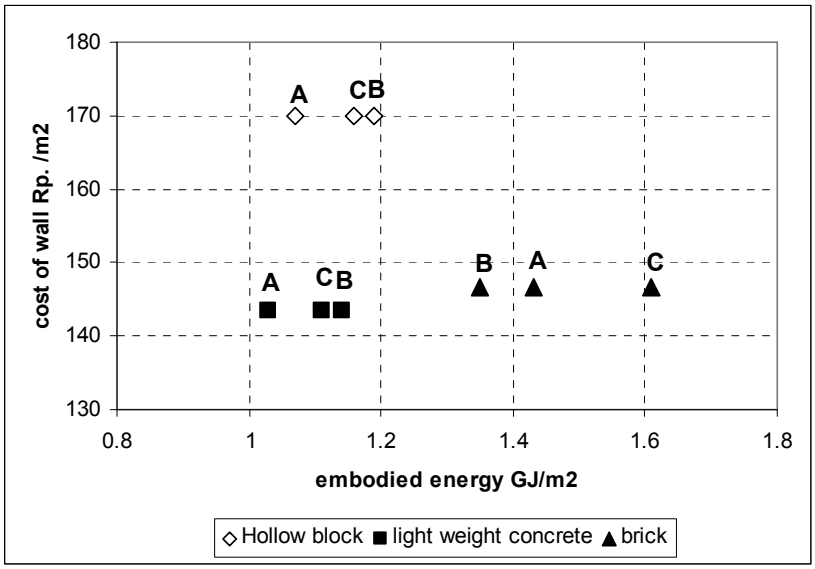

Figure 9. Grafik relation between cost of wall with embodied energy
Note: A: Sombo, B: Dupak Bangun Rejo, C: Wonorejo

6. CONCLUSIONS

- Building which utilizing low embodied energy material always does not has lower embodied energy building.
- Building with small Building Square always does not have lower embodied energy building and building cost.
- Sombo apartment represent building with optimal embodied energy building and building cost.
- Apartments with lower embodied energy have lower building cost, or sustainable buildings have low building cost.
- Apartment design for people with lower income in Surabaya has not been yet optimal to environmental attention and building cost.

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2 - 15

Enhancing Physical Quality of The Old Squatter Settlement Tegalkonas in The Urban Area

Fx. Soewandi[28]

ABSTRACT

The old kampung in the middle of city is ussually still in under developed conditions eventhough the area has more than 60 years of independence. As an old city (exs. Surakarta Hadiningrat empire), Surakarta is now becoming a center of national activities in the Indonesian urban structure. However, ironically, in fact, some areas still have under developed residents, especially in kampong-kampong in the inner city.

Kampong Tegalkonas, one of neighborhood areas in Pasarkliwon district, Surakarta, is an obvious example. The old kampung is located less than 1 Km eastern from the north town square (alun-alun utara) of Surakarta. There is no development, no welfare improvement since 1950's until now. Based on Richard Butler theory in tourism area life cycle model, Tegalkonas as an old kampong has reached stagnant stage. This saturation was held in a long time. Many projects implemented have no significant impact. Moreover, this leads to degradation of physical condition.

Therefore, this needs special approach for improvement of the community effort in order to sustain the project implemented. One of the approaches is social empowerment.

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1. INTRODUCTION

The old squatter settlement Tegalkonas exists in the middle of a big city. Since it has been built till today, it shows no positive changes, either physical or psychical (social, culture, and economic), although a variety of urban development programs, particularly the housing development, applied for "improving" the environment condition of the squatter settlement. "Improve" means the programs that have ever been done are in order to make the squatter settlement is physically better and more healthy (i.e. environment infrastructure, such as streets, gutters, toilets). It indicates that there is something wrong in handling of the housing development programs in the city. Whether the failure comes from the policy decision or its own community as the direct involved agent, or the other actor, it needs more discussing. This paper comes up as an opener for something "possible" in the stagnant-positioned squatter settlements which are let as always.

2. THE OLD SQUATTER SETTLEMENT TEGALKONAS EXISTENCE

Tegalkonas squatter settlement is one of the residential areas in Kedunglumbu village, Pasar Kliwon district. Tegalkonas is an old squatter settlement situated in the Surakarta palace area, where the palace is the starting point of the birth of Surakarta city. Based on the information from the community elders and the own experience of the writer that used to be the local resident, its condition neither physical nor psychical had meaningful development, if it is compared with the long term 63 years of Indonesian independence and the rapid advance of technology.

Before 1945 Tegalkonas squatter settlement had been residential place. Its density population was less than 20%. Along with the population growth besides urbanization, the recent squatter settlement becomes very dense fulfilled by population and buildings. Its population density is more than 200 persons/ha and the house building density is approximated more than 80%. The situation of the urban squatter settlement Tegalkonas today is getting worse by its residential neighborhood patterns, which are unstructured buildings, paths, gutters, ect. Then it is become slum in the city area.

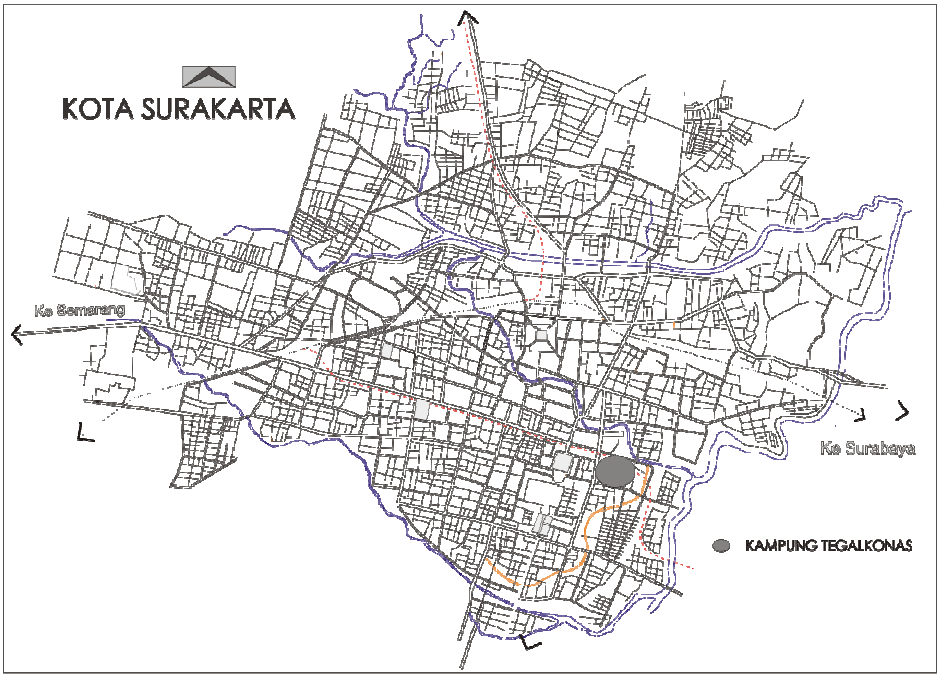

Figure 1. Tegalkonas squatter settlement location

2.1 The Physical Condition of the Squatter Settlement and the Land Using Pattern

Tegalkonas squatter settlement lies on eastern side of collector Secondary Street that is Kapten Mulyadi Street, where its daily life is crowded by various vehicles traffic. The northern side is limited by creek as the main accumulation place of the rain water. The terrain at the edge of the collector street is used for school, office, religious place and stall. The rest part is for house buildings, which some of them integrated with stall.

The middle area of the squatter settlement and the back-south eastern area aren't flat or rather heaved terrains. Even there is a high-rocky area. This topography makes difficulties for the community to arrange the building pattern and its infrastructure if they want to build.

The half official path pattern is the squatter settlement road which is a boundary with another squatter settlement and the path crossing the middle of the area. This path is narrow, rather arched, and disordered at the both side because its boundaries are wall, porch, and roof of the houses. The rest paths are spaces among the building regarded somewhat loose. It becomes lane for anyone. The lack infrastructures often causing problems are drain

and sanitation. It is caused of the unsupported physical condition. The rain water flows unwell, because the middle of the squatter settlement is low terrain and the existed drains can't circulate it fast. In the wet season, the water whelms the paths, whereas the civil flow the household liquid waste and feces into the river. The civil since long time built the impermanent toilet upon the river and its construction has been better built by government as MCK (bath, washing, and toilet). MCK is permanent building for the activities mentioned.

2.2 The Social, Culture and Economic Condition of the Squatter Settlement Tegalkonas

In 1950-1970s the highest education background was SMA (Senior High school), which was only two persons of the population.. Most of them are SD or was called SR in the past (elementary school) graduation, and those who were more than 30 years old commonly illiteracy. Despite its low education background, the community life seemed enough welfare. The sense of togetherness, tolerance, and friendliness band fast the relationship among the community. But ironically, after that time, where the advance of country and its technology grew faster, the civil got the higher education, even scholar level, the squatter settlement itself grew stagnant. However the sense of togetherness stays remained.

The review of the economic life of the community is categorized poor, as early as till recent. Commonly they work at informal sectors with the low or impermanent income. It reaches more than 95%. Compared with the prominent citizens, the gap welfare is conspicuous, because they both are located neighboring. Furthermore, the atmosphere in the prominent citizen area is individualistic.

3. THE GOVERNMENT EFFORT TO DEVELOP THE URBAN SQUATTER SETTLEMENT

There have been many programs from the central government, especially from Departemen Pekerjaan Umum (DPU, Public Work Department), Cipta Karya Directorate General, carried out for urban housing, such as squatter settlement improvement, urban area rejuvenation, rehabilitation, revitalization, ect.

The previous development programs by government implemented in Tegalkonas squatter settlement were "top down" programs. It means the programs are applied directly based on line items defined from central, whereas the civil just plug and play. The fact after the development was that the paths become better so that the price of the land get higher. They were fixated to sell it, and then moved to another squatter settlement in the same

previous condition. Another fact was that the civil have no sense of belonging. When there was damage, it was just leaved without repairing. The damage got worse. The impact disturbed their activities. Therefore, some activities "*Kerja Bhakti*" were finally done and held by their initiatives. Though the budget was not so high, the result helped much for the fluency of daily life activity in the squatter settlement. It made them satisfied. Then such *"Kerja Bhakti*" has been consecutively done, especially towards the Independence Day 17th August. The activities of *Kerja Bhakti* are flood handling, MCK repairing, drain and river cleaning from rubbish.

Either the local or central government later changed their area developing strategy that is bottom up system. The development will be done on the desire of the community. The realization turned out ineffective and against with their original behavior. The government applies formal procedure for every demand, but the community is accustomed to be informal and in oral culture. Furthermore, frequently the government allocates the fund less than the requested budget. It means that the fund allocated by government is only the supported fund. The main fund should come from the community demanded development.

4. THE HUMAN RESOURCE POTENCIES

It is usual that there are great deals of problems concerning squatter settlement and always come up every time. It can be said endless. Considering to the limited budget for development, it needs a way to arrange all the needs of building in order to adjust with the existed budget.

The building can employ the civil. The people of the squatter settlement are commonly simple, honest, and can work well accord with their skill. They will be reliable at working and can manage the money appropriately. The mutual assistance culture and the belief to the elders are high, some of them happen to be the "*Rukun Tetangga* (RT)" chief or "*Rukun warga* (RW)" chief. RT/RW is the smaller communities structured under the village government. The elders are useful to give an order in a mutual assistance (without payment). Even the outsiders are willing to do so, formed by the culture of the squatter settlement. So it is easy for them to cooperate. Their average income is low, but to collect fund for improving their squatter settlement is easy, though the contribution is small. The quantitative of the squatter settlement can be counted on, but qualitatively they may be lack skill. It needs of course the professional paid workers brought from outside. Their wage can be allocated from the "supported fund". Another supported fund still can be obtained from any foundation related to community developing.

5. RECOMMENDATION

1. Forming the building worker
   The budget for developing the squatter settlement is limited. Therefore, forming the unpaid developing worker is the right step, besides looking for another supported budget. The forming should be organized continually accord with the continuous developing.
2. Worker training by the government
   Considering the lack skill of the commonly civil squatter settlement, a short training or course are needed to be held in order to give a practical knowledge of the unpaid worker in order to get better skill. Compared with the payment of all the workers, this way is cheaper or lower budget.

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How is a Strategy for Sustainability of Coastal Slums Area in Rembang City, Rembang District?

Sunarti[29]

ABSTRACT

Population growth is very fast, especially lead to control of the illegal land by low-income communities. With limited land for a residence in the city made the state-owned land that is not used for public use area of settlement. Rembang subdistrict capital is located in the seaside city with the linier development along the beach. This has caused people choose where to live in the area because it is a strategic location and close to the main livelihood as fishermen. Settlement area is finally growing in conservation areas to the coastal area and into slums. The emergence of the legal settlement slums and illegal (squatters) because of the absence of regulation as a control in the provision of housing and services.

Goal in this article is to formulate strategies for the sustainability of the area's settlements in the coastal area of Rembang District. Benefit strategy formulation is expected to be input for the government to prepare development plans and policies related to the efforts of the city address the problem area slums settlements (slums and squatters).

Strategy for sustainability of the settlement area in a coastal site is *on Upgrading strategy* with community empowering approach. Priority lies in the upgrading of tenure include legitimacy, legalization and formalization of the process of integration to the market and the formal aspects of the de jure. Handling strategy to strengthen the economic activity for people who have a home business providing industry assistance loans for business capital of Rembang District. To support the sustainability of the settlements in the

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coastal Rembang city, people are encouraged in order to have the ability to utilize the resources optimally and fully involved in the mechanism of production, economic, social and the ecology. Recommendations for Rembang government as a policy can be more selective in terms of building permits the area to support the sustainability of coastal settlements in a safe and reasonable habitation.

Keywords: strategy, slums settlement, coastal areas, sustainability

1. INTRODUCTION

Rapid growth of population, especially for low-income people lead to control of land for housing illegally. Appearance the slum settlements and illegal (squatters) caused by the growing number of people faster than the government ability in setting up housing and services. Unbalance condition between growth and number of populated with development of a properness residents are increasing amount of slum residents.

Most of community choosing their residence location near with their workplace as a economic source. Likewise the community in coastal area, who work as a fisherman, they are live in a long of beach without pay attention to safety, comfortable, and worthiness of their residence. Disaster doesn't be the main problem for them, because they feel that the economic necessity as a primer necessity and the culture social factors have been adhere for them.

Rembang is the center of the city government centre as well as Rembang economy, trade and services, social and cultural activities for the region north of the district. The city be passed a primary arterial route Semarang-Surabaya. Location City Rembang, located in the District of Rembang is a very strategic location so that most of the population concentrated in the sub-district. Rembang subdistrict consists of 34 villages in the north and south of the provincial road. Most of their occupation as a fisherman, especially for residents who live in the northern province of the road adjacent to the coast. Land use in north Rembang sub-district dominated by slums area. The location of the fishing settlements and slums are concentrated in Rembang District is located in the 5 villages. Building density in Rembang that classified in slums as the following:

Table 1. Netto and Building Densities
Coastal Settlement Area in Rembang City

No.	Villages	Number of Population	Square (Ha)	Number of House	Settlement Square (Ha)	Netto Density (people/ Ha)	Building Density (unit/Ha)
1	Gegunung Wetan	1412	6,86	413	6,13	230	67
2	Gegunung Kulon	891	4,07	223	4,00	223	56
3	Tanjungsari	689	2,24	173	2,11	327	82
4	Pacar	604	7,24	401	7,20	84	56
5	Pandean	1958	175,00	531	19,58	100	27

Source: RP4D of Rembang District, 2008

Look at the building density, so take the problem formulation in this research is emergence of settlement in Rembang coastal area more dangerous for the inhabitant. Insecurity of Rembang government in monitoring and control of the building in coastal areas cause people with low income can build free houses in the area.

The purpose of writing this article is to formulate strategies for the sustainability of the area's settlements in the coastal area of Rembang District, so that the area is not damaged and people can live comfortably without any danger that threatens their lives. The field study focused on the settlement area which located in north of province road.

2. DEFINITION

According to the Directorate General of Cipta Karya Public Work Departement, Informal area (Slums and Squatters) is a area on a physics, economic, social cultures and social politics have degradation or some inherent problems, so ability of land can't used optimally. Smith (1979: 24) in detail to provide the restrictions as follows:

a. Slums are legal and permanent housing, but the physical environment condition worsened because of the settlement less maintenance, age of building ripen, or because-divided into units for the home or yard of the small room.
b. Squatters are illegal housing in the illegal land (not recommended for housing area), uncontrolled, unorganized, the physics and building a very ugly, without served by infrastructure facilities and environment of the city.

Settlements are not always illegally, and illegal housing not always slum. Squatters were related with land owned status, it is resident which built over the land that not their authority (other people or state land). Characteristic of the slum and squatter areas are described as follows (Abrams,1964: 10-27):

- It is groups of rapidly huts, with high density, narrow trail for entrance, built from oil drums, from sheet irons, tin-cans, paint, and use the plywood board.
- Grow and develop organically with physics and building condition is very bad and doesn't regularly, can't fulfill technical and healthy requirement, facilities and infrastructure environment lacking or below standard.
- Environment informal settlements illegally occupy the land (not the settlement, not according to the government's plan), not controlled and often not as organized along the time.
- Generally, the population have low of social status, economic, and education.
- Identically with criminality, bitch, and full of hopeless people, no fixed work (often seasonal), and relatively low earnings in the informal sector
- Density of the Basic Building coefficients (KDB) is greater than that permitted (KDB almost 100%), the population density exceeds the resources to support the environment (1000 persons / ha).
- People still bring nature and behavior of rural life that involved family ties in closely.

The main trigger of the informal settlements in urban areas, namely management factors and economic pull factor. Location which has the potential to develop as an informal settlement is a land where government land-management/ management of the area is not clearly defined, such as flood plains in which the management authority of the central authorities, province or region.

Informal settlements can be categorized as housing is not feasible with the condition of the house and its environment does not fulfill the requirements of a decent place to stay for good physical, social and health, among others, the criteria (*Infosocieta.com*):

- Floor-space per capita, in urban area less than 4 m^2 and in rural area less than 10 m^2.
- Type of roof house made of leaves and other
- Type of wall made of plaited bamboo, which has not been processed.
- Type of floor in form of land
- Haven't any facilities to wash, bath, toilet.

In almost all developing countries, rapid urbanization process, little resources and the inability to establish institutions of a reliable in order to direct the development process has created forms of informal settlements. So that the resulting impact is The growth of the settlements with the bad standards and is often concentrated in a particular location. Social conflicts will often show the occupation of land is built as a place to live has brought

on a problem of tenure security that is not related to the strong status of land owned by someone, who is depending on the legal aspects and social assets.

This related to the informal tenure seen as illegally something in which their existence not get a place in the legal system of land law and local custom. In this case, the UNCHS (Habitat Agenda), has recommended that informal tenure in the settlement area should be legal and formally. For that, there are several conditions that must be observed before the informal tenure formally, the (United Nations, 1999 in Rudiarto, Iwan, 2006: 7):

1. Formalization and the provision of shelter necessity for people depends on the availability of land for settlement. This is the responsibility of the government both local and central to facilitate the formalization of land for a reasonable area as a new housing development.
2. Demand for formal land tenure should be come from the people who live in the area. For that people should be convinced that formalization will provide positive impact and benefits of the loss.
3. Local government should be provide in a simple land use planning and it mentioned that the area is eligible to become a settlement area, so the requirements for legal formalization can be founded.

One way that can be offered to improve the quality of the environment without condemm or destruction of a residence is the squatter settlements up-grading or on-site up-grading i.e. providing opportunities to the people who lived in the sprawl area to stay, in a way to introduce or develop a network of roads and water simply, increase sanitation facilities, and seeks to encourage people to perform their work itself (Rudiarto, Iwan in Tata Loka, Vol.8, 2006: 7).

Definition of coastal area according to Sorenson and Mc. Creary in Clark (1996: 1)"The part of the land affected by it's proximity to the land…any area in which processes depending on the interaction between land and sea are most intense". According to Ketchum in Kay and Alder (1999: 2) "The band of dry land adjancent ocean space (water dan submerged land) in wich terrestrial processes and land uses directly affect for oceanic processes and uses, and vice versa".

Definition coastal area according to the latest international agreement is the transition between mainland and ocean, to the land cover areas that are still affected of ups and down, and sea to cover the continental shelf (Beatley et al, in Dahuri, dkk, 2001: 9).

There are some interests that must be considered in utilizing, managing and controlling the development of coastal areas (Mulyadi, 2005: 103), are as follows:

1. **Coastal importance in terms of the Social Culture.**
   Indeed, have any relation with the coastal socio-cultural patterns of a particular group of people. A community from generation to generation is very closely related with the functions of the coast will have close ties with the coastal area and its potential both physically and spiritually.
2. **Coastal importance in terms of economic.**
   The sea have the potential of natural resources in the form of a rich potential production (fish and other ocean crop) and the potential of natural beauty is one of the source of an economy that is important in order to increase regional and national income.
3. **Interest in terms of the Coastal Defense and Security.**
   Given the geography of the coastal front gate outside parties, coastal works as an important factor in the defense and security strategy.
4. **Interest in terms of preservation of Coastal Environment**
   With the coastal marine is one of the natural gift that can be used for human life. However, with different capabilities are used and should be used in a manner that is as good as possible so that it does not rise to the negative implications of the overall environment. Therefore, in the framework of the coastal business interests to the above, the environmental conservation efforts related to the balance of humans, fauna, flora, and natural need to keep in and arranged. Thus, the purpose of increasing economic development on the one hand will not cause problems on the other hand.

Based on the problems that have been experienced so far, i.e. coastal uses and importance of coastal area from several living aspect, so an effort to develop, to plan and to control the coastal area will involve main aspects, i.e :

a. Improvement of socio-cultural life of the community
b. Increased economic standard of living coastal communities in general
c. Effective and efficient of land use
d. Development, arrangement, and controlling of spatial plan in coastal area, which develop because of population growth and their activities.
e. Increasing of supporting facilities in the coastal area development, belonging to physical facility and institutional facility.

Especially related with an efforts of development, arrangement, and controlling of land use in coastal area, important things that must be attention are (Mulyadi, 2005: 106):

1. The coastal land ownership patterns
2. Coastal land use

3. Arrangement of coastal land use
4. Increasing of the land regulation in coastal area

Due to the efforts of coastal land use, arrangement and controlling, there are need a regulation and good control pattern. For this, based on the possibilities and importance of the utilization and development of coastal regions, the conceptual way of the development of coastal areas can be considered as follows (See Figure 1).

a. Sectoral pattern of control, i.e. a pattern of domination or control of a sector-shaped concentrated in upper reaches of river and out along the river to the coastal region. This pattern is very important to arrangement the development of potential river flow area.

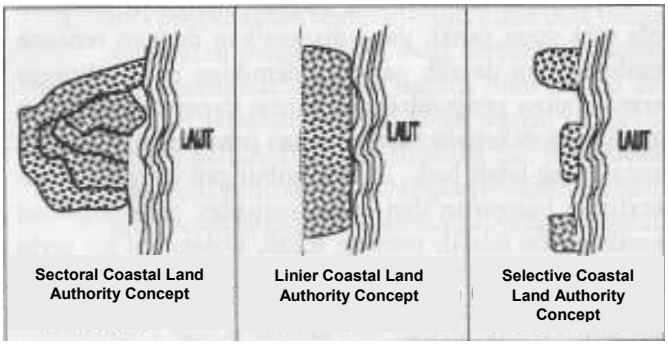


Figure 1 Control and authorizing concept for coastal area
Source: Sujarto in Mulyadi (2005:110)

b. Linier pattern control is land control all along the beach, in which beach line widely 500 until 1000 meters from ups water boundary, it should be authorized or controlled firmly.
c. Selective pattern control is an effort to control the growth of coastal area based on specified urgency, example the part of coastal area on serious condition, must be kept their sustainability, or the development must be controlled firmly by government like a mouth river, nature preserve, and pacifier beach.

3. PROBLEMS OF SLUMS AREA IN REMBANG COASTAL AREA

Such as fishermen generally, a resident in Rembang city have characteristics are: located in the border area of the coast and rivers high density and number of population, sprawl settlement and directly affected by ups and down, various of ocean crop processing activities, cultural life and that tends to coarse. For more details and potential problems in the coastal settlement of Rembang faced were:

1. **High density of resident building factor**

Building density is affected by width and amount of resident area, in which if number of populated are big, so land availability should be width too, if not it causing high density in the resident area and then appear the slums area. The development that happen right now, more of buildings were built in seashore, doesn't care with environmental damage and dangerous of abrasion that will happened. In here, most of building status have a certificate, whereas in fact the building location near with sea. Building requirement was built in seashore minimal 500-1000 meters from ups water boundary.

2. **Low economic factor**

Most of the economic conditions of fisherman in Rembang city are poor, especially in Gegunung Wetan and Gegunung Kulon villages, it is more influence for resident condition. Non-permanent building are dominated in there, this buildings made from bamboo, floors still made from soil, and the roofs made from leaf. This table is reflecting the degree of human poverty in Rembang city.

Table 2 Poverty Degree
The Settlement in coastal area of Rembang City

No.	Villages	Families	Poor Families	Prosentase (%)
1	Gegunung Wetan	346	195	56,36
2	Gegunung Kulon	239	144	60,25
3	Tanjungsari	688	198	28,78
4	Pacar	351	77	21,94
5	Pandean	531	114	21,47

Source: RP4D of Rembang District, 2008

Table 3. Number of Non-Permanent Building
The Settlement in coastal area of Rembang City

No.	Villages	Number of House	Non-Permanent House	Prosentase (%)
1	Gegunung Wetan	413	238	57,63
2	Gegunung Kulon	223	154	69,06
3	Tanjungsari	173	73	42,20
4	Pacar	401	228	56,86
5	Pandean	531	114	21,47

Source: RP4D of Rembang District, 2008

3. Less of infrastructure availability

Availability of infrastructure for fishing settlement in Rembang city, such as drainage and sanitation are inadequate, either scale, channel, and disposal system. Channel system is affected by tidal sea water because the water is very close to the sea. Sprawl structure pattern of resident are increasing complexity of drainage systems. Sewage system, sanitation and drainage system is not functioning optimally cause there are lots of water, this is the cause of the emergence of a variety of diseases. The lack of trash in each house and the trash does not practice in place increasing slums area. Similarly, the WC/ MCK in their home, who do not use a septic tank.

Necessity of fresh water is lack, while the water that to flow out from artesian well has bad quality because it contains a lot of salt, as for PDAM can't supply all of the fresh water necessity in settlement area. Especially for Gegunung Kulon village are supplied just 27 Head of Household (11,3%) from 239 families, and Gegunung Wetan village only 33 families (7,99%) from 413 families, other villages already supplied but the water condition and the services are still not fulfilled. Illustration of infrastructure condition in fishing settlements in the table below.

Table 4. Infrastructure Availability
The Settlement in coastal area of Rembang City

No	Villages	Road	Electricity	Fresh Water	Telephone
1.	Gegunung Wetan	Village road	Supplied by PLN	PDAM, well	Not Supplied
2.	Gegunung Kulon	Village road	Supplied by PLN	PDAM, well	Not Supplied
3.	Tanjungsari	Village road	Supplied by PLN	PDAM, well	Supplied
4.	Pacar	Village road	Supplied by PLN	PDAM, well	Supplied

No	Villages	Road	Electricity	Fresh Water	Telephone
5.	Pandean	Village road	Supplied by PLN	PDAM, well	Supplied

Source: RP4D of Rembang District, 2008

In addition to infrastructure to support a residential area equipped with the settlement needs of the environment. Availability of facilities in the area of settlements such as the table below. Means that there is not complete because of the location of this settlement is not a village growth centre. Therefore, access to and from villages and Gegunung Kulon village Gegunung Wetan need to be planned and improved.

Table 5. Facility Availability
The Settlement in coastal area of Rembang City

No	Villages	Education	Healthy	Liturgy	Trading
1.	Gegunung Wetan	Kindergarten	Posyandu, midwife	Church, Mosque	Small shop
2.	Gegunung Kulon	Elementary School	Posyandu	Mosque	-
3.	Tanjungsari	Kindergarten, Elementary School	Posyandu, Doctor	Mosque, Musholla	Small shop
4.	Pacar	Kindergarten, Elementary School	Posyandu	Musholla, Church	Small shop, Shop
5.	Pandean	Secondary school	Posyandu, Doctor, midwife	Mosque, Musholla	Small shop, Shop

Source: RP4D of Rembang District, 2008

4. Spatial Plan and Lack of Accessibility

Existing conditions in the residential of coastal area that is only part of the plan in accordance with the spatial plan, but there is a path using the green belt of the beach. If linked to the President Degree No.. 32/1990 Existing conditions with almost the entire building doesn't fulfilled the physical conditions. To overcome this much-needed role of government for the greater community in the procurement of housing for low-income communities, including building facilities and physical infrastructure-settlement.

Access to the environment only 1-2 meters because of the high density of building, so the four-wheel drive vehicles difficult to enter the area. In the event of a fire, car extinguisher can't enter to the settlement area, this is very dangerous for the area.

The role of government is needed more in the control of regional settlement that will lead to the development of the settlement does not regularly, as well as negatively impact the environment.

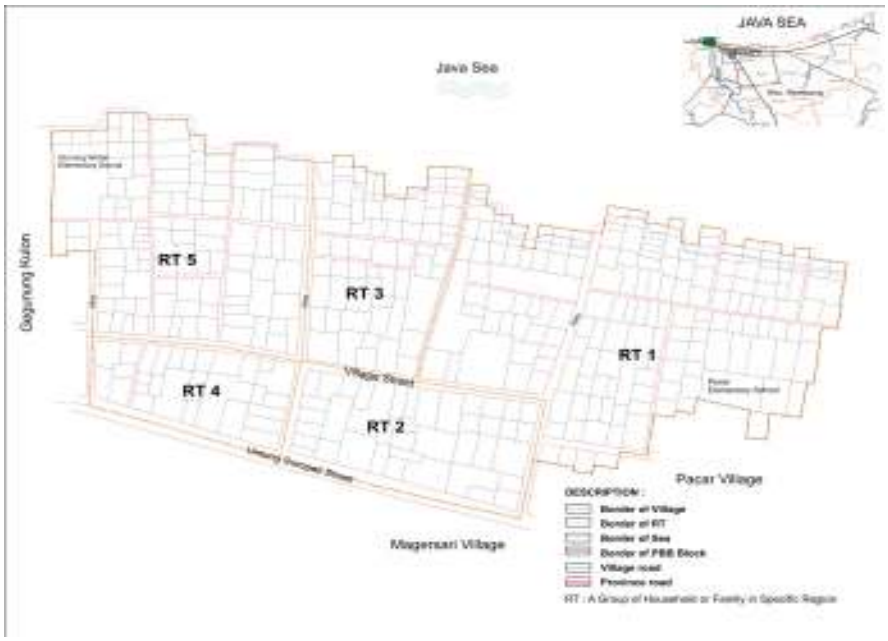
4. THE HANDLING STRATEGY OF SLUMS AREA IN REMBANG COASTAL AREA

Strategy in handling the slums area in the Rembang city with the condition problems such as the above, there are several approaches that can be done. Formulation of a strategy expected to be useful for coastal communities and the physical condition of the environment does not become damaged and the viability of communities can sustain. While some of the strategies proposed include:

- Land use for settlement in accordance with the spatial plan that is used optimally and efficiently, given that the land is located in a strategic location and has a high economic value, for who haven't permitted, so the strategy is security tenure in the form of legality guarantee through the tenure up-grading.
- Slum settlements, is the area of slums that have lower quality review of the physical facilities and infrastructure, but its as the legal settlement. This is shown with a high building density, the quantity and quality of facilities and infrastructure worst. Strategy which is to be done to improve the quality of environmental settlement effort include the repair or restoration, renovation and maintenance of the management and development. On-site Up-grading Strategy with the supporting of social structure, cooperation and community involvement directly, non-governmental organizations (NGOs) and educational institutions and academics. The success of On-site Up-grading strategies based on the willingness of the community and the ability (efforts) of the community.
- Squatter setllement, the slums settlement that occupy the land that is not defined for the residential area, occupying median and is located in the coastal border. Residential area on sandy beach with a narrow space and is located in the median area, which is government land, then the strategy is a relocation of houses adjacent to the coast and threatened to be exposed to danger of abrasion, and then rehabilitated into the area border beach. Development of coastal areas should be more strict. Rehabilitation aims to improve the quality and value of the environment, so that in accordance with the role and functions available.

Riparian area become a free building area with the distance 500 to 1000 meters from the high tide limit. To accommodate residents who relocated

so can built the houses vertically at a location close to public housing and their work place. In addition, improvements can be made and additional length and width of the road between 1-2 meters to the beach so that accessibility in the distribution of the catch to be returned.



- The handling strategies that related an efforts to strengthen the potential/ economic activities of the community through support for small industries (entrepreneurship) is the empowerment of the community (community empowering), which supported by the Rembang district form of capital credit for communities or Community Empowerment Program (PPMK), namely capital assistance (loans), which comes from the budgets of Rembang Local Government.
- Control of development in coastal areas can be done with not giving permission to build on the beach border area. Licensing systems and mechanisms must also be appropritae with the land use on coastal areas, directly related to the utilization of coastal waters, the requirements regarding AMDAL (Environmental Impact Analysis), the technical recommendations from related institutions and public access guarantee. Permits will not be given if the built space utililization activities can damage or in other words the coastal area environment can threaten.

5. CONNECTING COMMUNITY EMPOWERMENT AND SUSTAINABLE DEVELOPMENT

Strategies above can be worked when supported by community empowerment. The concept of community empowerment and community development are the process to facilitate and encourage people to be able ensconse in a proportional and be the main actor on using of the strategic environment to achieve a sustainability in the long term. Empowerment of communities have close relation with the sustainable development in which community empowerment is a prerequisite to the sustainability of the economic, social and ecological dynamic.

Strategic environment that is owned by local communities include the production environment, economic, social and ecological. Through empowerment, citizens are encouraged have ability to utilize resources optimally and fully involved in the mechanism of production, economic, social and the ecology.

In the case of production mechanism, the community has the resources of production assets include capital, land, fishing equipment and labor. Empowerment efforts should be encourage and facilitate the society that most of their work as a fishermen, so they are able to produce efficiently and guarantee the fulfillment of food and have a surplus that can be marketed.

Sustainable development community with the management of ecological resources wisely by local communities. In this ecological mechanism include environmental aspects that is very knowledgeable about the community, including how people are given the opportunity and encouraged to manage and utilize resources such as the ecology of sustainable natural resource that is rich in the form of potential production (fish and other ocean crop) and the potential for beauty nature. Community invited as an object in the management of ecological resources, the people involved in planning, decision making and management of the ecological resources. In the coastal areas for the business importances like above, an efforts of environmental conservation related to the balance of humans, fauna, flora, and natural need to keep in and arranged.

Related with the market mechanism/ economic, an efforts to create economic/ market institutional with the aim to increase of fishery communities access to markets. The formation of cooperatives for the provision of capital and production facilities and marketing other products or through support for small industries (entrepreneurship) in the form of capital credit for communities or Community Empowerment Program (PPMK).

Related to the social mechanism, most of the communities in the coastal area in Rembang district still has a strong social relationship as a networking, which is often called the terminology specific social capital. This has important and positive role, refer to economic growth. Economic

transactions will worked more efficiently if it is supported with the social relationship is steady and strong. Coastal communities in Rembang district still give a high priority to social relationships at the time of emergency events (death, floods, landslides, etc.), job of development and maintenance of public facilities, job-related with request assistance (home development, custom events). Indeed, have any relation with the coastal socio-cultural patterns of a particular group of people. A community hereditary is very closely related with the functions of the coast will have close ties with the coastal area and its potential both physically and spiritually.

Internal factors that can be developed by a community self-reliance is a traditional form of local institutions associated with the economy/ market i.e. a group of savings and loans self organizing. This is a community empowerment which is the internal factor that connects between the principles of market economy and social closeness relationship to developed for productive activities.

In the process of community empowerment should be accompanied by a team of facilitators who are multidisciplinary. Facing this team is one of the external factors in the empowerment of the community. The role of the team at the beginning of the process is very active, but will be reduced gradually as long as the process of running independently. For more details of the process of community empowerment and sustainable development can be seen in the diagram below:

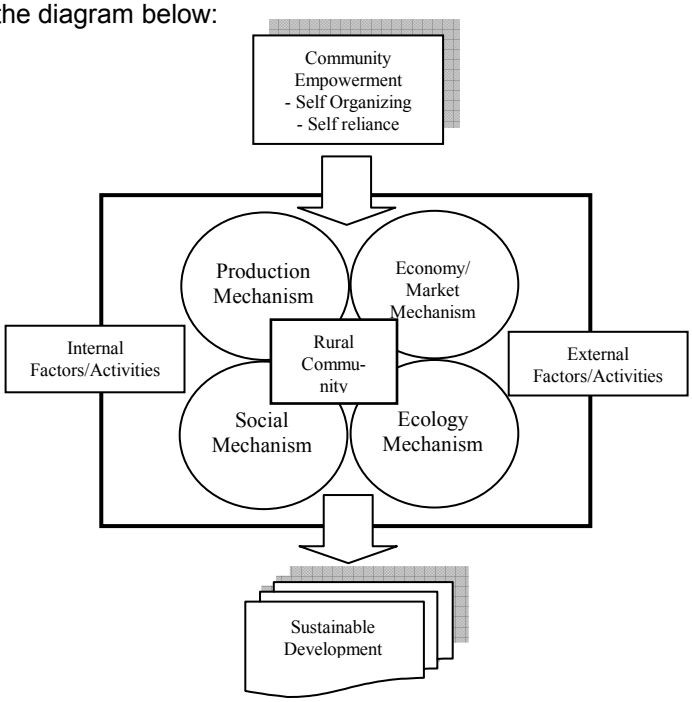


Figure 2. Process and Relationship between Community Empowerment and Sustainable Development

6. CONCLUSSIONS

In On-site Up-grading Strategies, the main priority and the emphasis is up-grading tenure include legitimacy, legalization and formalization of the integration process to the market and the formal aspects of the de jure. Tenure up-grading is related to the legality of the settlements that already place some forty years and in accordance with the spatial plan. Legal aspects or region legality is fundamental to determine the development and improvement of environmental settlements. With the fulfillment of legality status will cause a sense of security for the community, it can be impact on the growth of ownership (sense of belonging) and so will affected to the efforts to repair the physical condition of the environment and infrastructure, especially improving the quality of the environment.

Strategies for improving the quality of the environment is the provision of trash in each house, making the road inspection in the beach border to prevent the illegal reclamation and road inspection, creating a drainage channel so that water does not occur, MCK communal creation, provision of clean water with the appropriate amount of citizen necessity, good and accessible distribution system and supply for citizens.

Settlement area, located in the coastal border with the illegal (squatter) harm to the disaster that will happen, the strategy is relocation with vertically up the house equipped with facilities fit the needs of fishing communities in coastal areas.

To support the sustainability of the settlements in the coastal slums Rembang city closely related to the relevance of empowering communities with sustainable development. The strategy is conducted with the empowerment efforts, encourage community so they have ability to utilize the resources optimally and fully involved in the mechanism of production, economic, social and the ecology.

In the production mechanism related with the potential of the community, namely capital, land, fishing equipment and manpower too. While the mechanism of economic effort is made economic institutions/ capital markets by increasing access to business and market. Mechanism with social habits of the coastal communities about the social relationship very supporting the development and maintenance of public facilities. Ecological mechanisms related to the environment aspects, to manage and utilize resources in the coastal so the environment conservation can be awakened and the balance between human beings, fauna and flora naturally. Internal factors related to self-organizing in the community and external factors which form the team is a facilitator mechanism in addition to other factors of production, economic, social and ecological sustainability of the area to support the settlements in the coastal area and they can continue their activities independently.

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2 - 17

The Building Upgrading in High Density Plot Settlement with Respect to Thermal Comfort Towards a Sustainable Concept

B. Heru Santoso[30], Sri Nastiti N. Ekasiwi[31],
I Gusti Ngurah Antaryama[32]

ABSTRACT

This paper analyses thermal problem in high density plot settlement. Theoretically, the potential of poor ventilation and high heating is very dominant problem in such area. It affects the indoor heating process and thermal comfort more difficult to achieve in building. The aim of the study is to combine the aspect of building upgrading in high density plot settlement and thermal aspect as a way towards a sustainable upgrading concept. The method used in the study was by field survey combined with simulation studies. The study took place at Kemlayan Kampong, Central Java. The result indicates two strategies. The first is use of material contributing in reducing the indoor temperature. The second is use of building lay-out and corridor systems to provide an adequate outdoor air movement. The outdoor air movement in high density plot settlement is a great potential for indoor air flow and also in achieving naturally thermal comfort in building.

Keywords: air movement, heavyweight material, high density plot settlement, thermal comfort

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1. INTRODUCTION

Refers to the issue of global warming in the last decade, climate change is an impact that must be faced and anticipated by all people in the world. One of obvious impacts of climate change that emerges and can be felt by people in tropical region is air temperature increase in residential space particularly in urban area. Because of many aspects in urban centre, like: the high building density, the sum of vehicles, paved surface, the limitation of vegetation area etc, the air temperature in urban area will be higher than that in rural area. In Indonesia, residential space with high density plot settlement, well known as kampong, is a common characteristic in urban environment. Most of people living there have a limited plot size. Most buildings in that area do not have any space and distance among the buildings. On such settlements, it is also impossible to place vegetations that can provide shading effect. Meanwhile, shading effect itself is one of strategies in reducing indoor air temperature. Because of plot limitation, it is impossible to create cross air ventilation. Most buildings use only one side opening to ventilate indoor space.

It is predicted that this condition will influence to thermal and wind condition around building. Poor thermal and wind condition around building will automatically influence to achievement of building thermal comfort. Naturally thermal comfort on building has close relationship to concept of sustainable.

The study concerns to thermal aspect as a strategy towards a concept of sustainable building upgrading. In this paper, two aspects will be considered, those are: building upgrading in high plot settlement as well as thermal aspects as a way to create a sustainable concept of building upgrading. The method used in the study was by field survey combined with simulation studies. The study took place at Kemlayan Kampong, Solo Central Java. The objects observed for study is some blocks of settlement and houses having some different characteristics.

2. HEATING AND VENTILATION PROBLEM

In Hot Humid Tropical region, high air temperature and high air humidity are very familiar condition for people. Temperatures are high and follow a very constant diurnal pattern throughout the year. The annual mean temperature is about 27 ^{o}C and the range of the average monthly temperature very small, at 1 – 3 deg C. The diurnal range, on the other hand, is about 8 deg C. Maximum temperatures are usually about 30 ^{o}C, with extreme temperature of about 38 ^{o} C Those conditions influence in achieving thermal comfort. This condition will be worse with global warming phenomenon. It is also influenced

by the level of building density condition, the higher the building density in an area, the worse the thermal condition.

On a high density plot settlement, dominantly buildings tend to have one side opening as ventilating devices. Theoretically, on openings with effective cross ventilation, average internal air speeds can reach 60 % and maximum speed 120 % of outdoor free wind speed. If there is no cross ventilation even when windows are open the average air flow may only be 15% and the minimum 10%. So, the outdoor wind potential in high density plot settlement is very essential in providing indoor air movement. (Givoni, 1969).

On the other hand, availability of the outdoor wind potential is also affected by the roughness elements, and the flow patterns vary locally *(Maruyama T, Ishizaki H. 1988;28:139–48.* It is usually assumed that an increase in building density reduces the wind velocity in the urban area. (*Givoni*, 1998; Brown,GZ, 2001 in Tetsu Kubota,Masao Miura et al,2008 Science Direct Journal)

Meanwhile, with tin, low resistance and capacity walls, externally dark, and/ or with large unshaded windows, indoor temperature are often more than 10 deg C above the outdoor level; if ventilation is also absent, the elevation of indoor above outdoor maximum may rise above 20 deg C. The amplitude of interior air temperature is then 1.5 – 3 that out of doors (Givoni, 1969, p.308). Using white exterior with thick wall and small, closed shaded windows it is possible to reduce the internal range to below 10 %, and the internal maximum by 50 % of the outdoor temperature.

So in this paper, the intended building upgrading is modifying old buildings with new material of wall and or roof by considering the thermal aspects.

3. SUSTAINABLE CONCEPT IN HOUSING

The term of sustainability actually has a close relationship to the environmental emergency in which the present world is facing the lack of un-renewable resources. In 1987, the World Commission on Environmental Development defined sustainable development as a development that meets the needs of the present without compromising the ability of the future generations to meet their own needs. There are at least 3 key factors through which building can contribute to global sustainability: Sustainable Construction, Sustainable Technology and Sustainable Communities. In Sustainable Construction, as introduced by Kibert et alii, the definition is the creation and responsible maintenance of a healthy built environment based on resource efficiency and ecological principles (Emilia Conte in Maiellaro, 2001: 12). She also stated that Housing policies in a cities can be a productive field of experimentation of real sustainable building practices considering the triple aspect of sustainable development.

The development can also be considered as sustainable if it meets a correct social-economic-environmental equilibrium. Grunkemeyer in 2000 (in Maiellaro, 2001) also saw that sustainable have many definitions which are vague and ambiguous. Sustainable is a concept whose power resides in the integration of economic, social, and ecological systems. The great differences among places in the word have led towards the concept of local sustainable development as a contribution to global sustainability.

So, viewing all statements above, the condition of housing in a high density plot with respect to thermal comfort point of view becomes an urgent problem to solve towards a concept of sustainable. In such a condition, this can involve many aspects, such as: economic, social, environmental, technology, construction and community.

4. HIGH DENSITY PLOT SETTLEMENT AT KEMLAYAN

Kemlayan as a common Kampong is one of high density urban environment in Surakarta. It consists of many kinds of low rise building which stands very close one each other. It has inadequate open spaces, narrow street house access with high wall on the two sides, limited vegetation, narrow distance of building spacing, limited building opening, irregular building lay-out, and almost similar building height, etc.

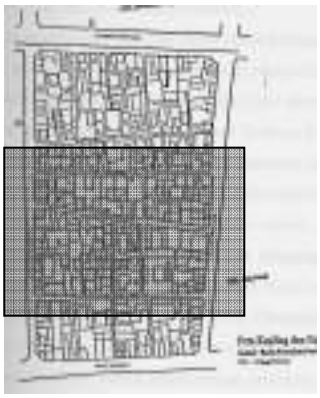


Figure 1. The Map of Kemlayan Kampong

Figure 1. Solid and Void condition

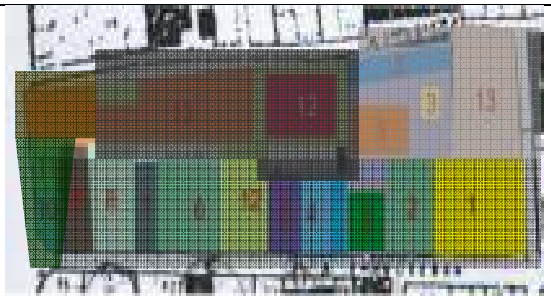
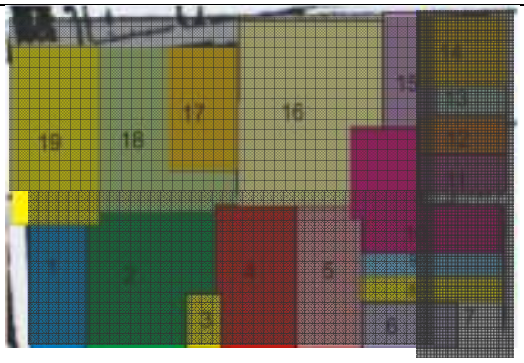
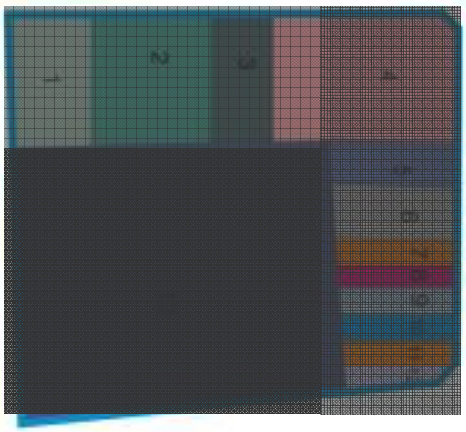
Figure 2. The Situation of Kemlayan kampong

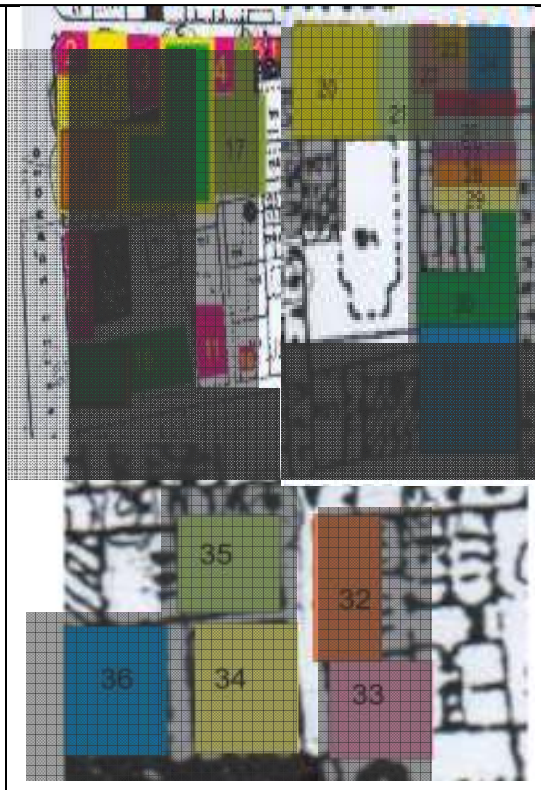
Globally kemlayan kampong consists of many blocks. Each block is bordered by kampong corridor. Based on the previous study, the blocks are divided into some typologies. They are linier with low density plot, linier with high density plot, cluster with high density plot and combination of linier and cluster.

So, based on the typologies at Kemlayan kampong, the study was focused on the 4 blocks as representative of kampong condition. The blocks lies in the middle part of the kampong (figure 1.1). The position of the studied blocks was considered far from street so the outdoor air velocity is not influenced by air movement induced by transport traffic movement.

From table 1.1. It is known that each block consists of some group of buildings having similar building mass layout. The building mass layout is distinguished in orientation, entry gate etc

Table 1. Building Density Condition

Block No.	Building Lay-out	Condition of Block
1		Block 1 has at least 13 buildings. Most buildings (building 1-9)are a group of buildings with high density plot level. Building 12-13 are buildings with low density plot level. Commonly most buildings have thick wall construction with one side ventilation
2		Block 2 has at least 19 buildings. Most buildings are buildings with high density plot level. Building 2,10 and 16 are buildings with low density plot level. Commonly most buildings have thick wall construction with one side ventilation
3		Block 3 has at least 13 buildings. Most buildings are buildings with high density plot level. Building 13 is building with low density plot level. Commonly most buildings have light wall construction with one side ventilation

4		Block 4 has more than 35 buildings. Most buildings are buildings mix between high and low density plot level. Commonly most buildings have light and thick wall construction with one and two side building ventilation

5. THERMAL AND WIND POTENTIAL AROUND BUILDING

The measurement of outdoor thermal condition and outdoor air velocity was taken at 30 points (Figure 3. Measurement points on Outdoor space. The measurement was done in 3 times a day (in the morning, afternoon and evening). Based on the result of field survey of thermal and air velocity on outdoor space at Kemlayan Kampong, it can be seen that in the coldest month at Kemlayan Kampong the outdoor air temperature shows 29.2^{o} C-33.5^{o} C (at 09.00-11.00), 30^{o} C- 33.8^{o} C (at 12.00- 14.00) and 25.9^{o} C- 30.6^{o} C (at 15.00 – 17.00). The outdoor air humidity is 60.8 %- 74.5% (at 09.00-11.00), 58.8 %- 80.5 % (at 12.00- 14.000) and 67.1 % - 90.6 (at 15.00 – 18.00) with air velocity between 0.0 – 4.5 m/s (0.0-2.5 m/s in average).

While compared to simulation result, it can be known that wind potential of outdoor space has air velocity around 0.1 – 2.5 m/s (0.28 m/s in average) with windward potential in simulation study is around 2.1 -2.4 m/s (in the hottest months) and 0.5 – 2.5 m/s (in the coldest months). So, it means that

wind potential in the field is higher than that in simulation. Yet, commonly the climate condition at Kemlayan is higher (hotter) than the climate condition in Surakarta.

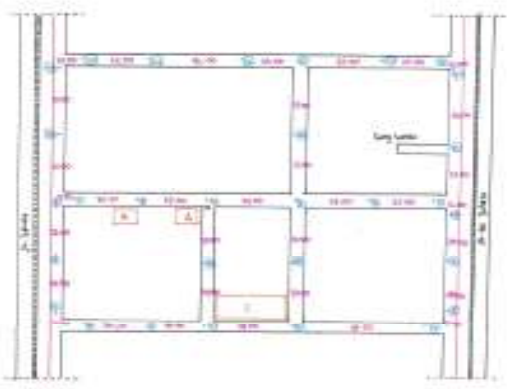


Figure 3. Measurement points on Outdoor space

Figure 4. Graphic of Thermal Condition on outdoor

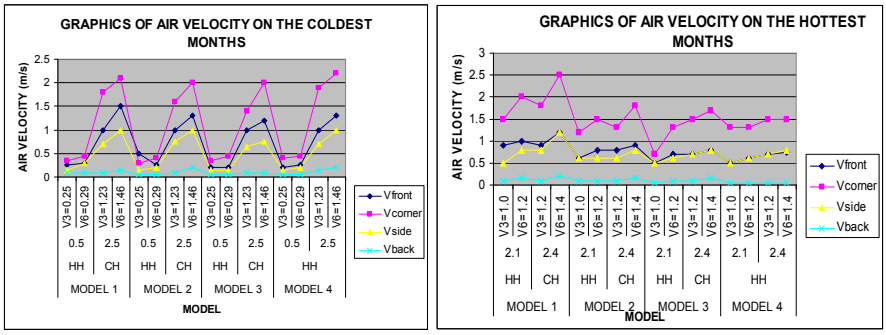


Figure 5. Graphic of air velocity on the hottest months and coldest months

6. THERMAL AND WIND POTENTIAL ON BUILDING

This is a result of measurement of thermal and air velocity on some buildings. It was taken 3 buildings with different characteristics. From, in the coldest month, the indoor temperature commonly is around 27.0 – 30.3^{o} C and still lower than outdoor air temperature. From the 3 buildings observed (Building A, B and C), all buildings mostly use one layer of brick wall materials with different characteristic of its environment.

In the morning, building A has a lower air temperature (27.7^{o}C) with indoor air speed between 0.1-1.2 m/s (0.5 m/s in average); in other hand, in the afternoon, it has a higher temperature than the others (30^{o}C) with indoor air speed 0.4 m/s (in average). Building C has a higher air temperature in the morning (29.1^{o} C) with air velocity is0.52 m/s. It has a lowest air temperature in the evening (27.4 ^{o}C) with air velocity is 0.75 m/ s). From those results, it can be known that in the building material building A with a limited plot has a good thermal condition in the morning. In the afternoon and in the evening it has little higher than that in other buildings (larger plot).

In indoor air velocity potential, all buildings have air velocity between 0.1-0.95 m/s. Building A with single opening has air velocity 0.1-0.5 m/s (higher than outdoor air velocity, i.e 0.13-0.44 m/s). Even on Building B and C (with larger plot), the indoor air velocity is around 0.1- 0.95 m/s. It means that at environmental condition of high density plot settlement, the indoor air velocity is very potential. Irregular building mass lay-out can create a good air movement at outdoor space. It influences significantly to indoor space.

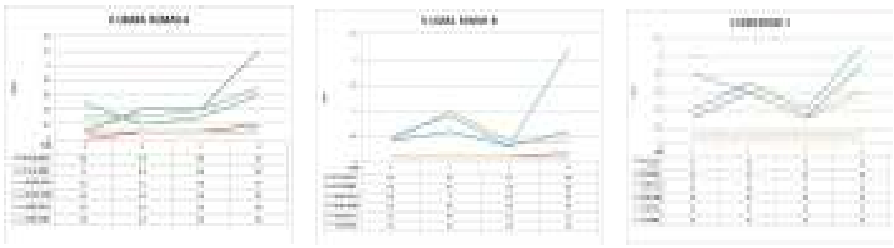


Figure 6. Graphic of Air Velocity of Building A,B, and C

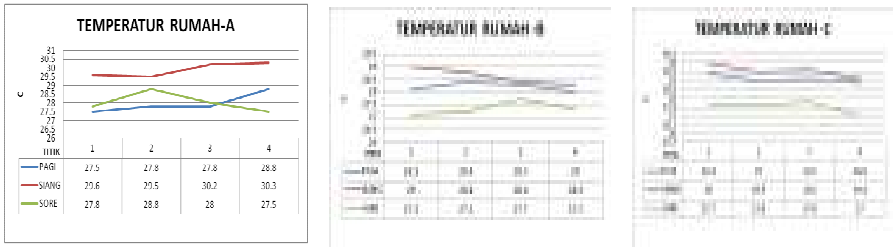


Figure 7. Graphic of Air Temperature on Building A, B and C

Figure 8. Graphics of Air Humidity on Building A,B, C

From **Error! Reference source not found.**, in the hottest month, the outdoor temperature condition is shown on red one and on blue one. It shows the outdoor temperature in the afternoon is between 28 – 33.8^{o} C. From **Error! Reference source not found.**1.10 (on the right) the outdoor condition shows 27 - 31^{o} C. In the evening until morning in the building D the outdoor temperature is between 22- 26^{o}C and building E is 22 - 27^{o} C. At those positions, the indoor temperature is always converse. That means the building provides lower temperature than the outdoor, up to 1- 3 K, and increase indoor air temperature up to 1 -3 K during night. During the measurement period, the building opening is relatively closed, so wind cannot enter the room freely (Vi= 0 m/s). By those conditions, the indoor temperature will theoretically always be lower in the afternoon and higher in evening- morning than outdoor temperature.

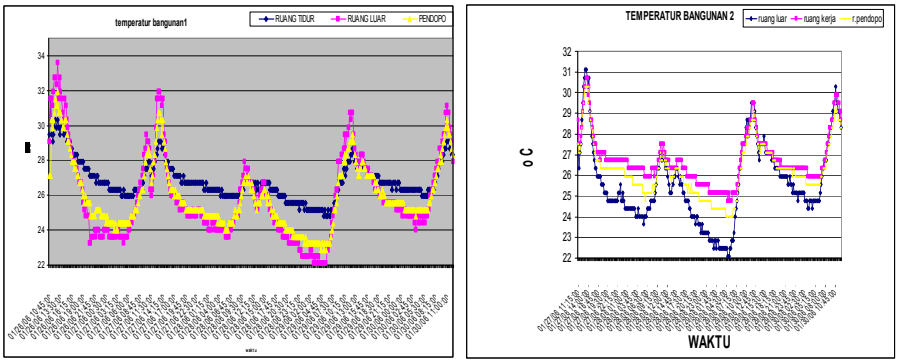


Figure 9. Thermal Condition on Building D and E on the hottest month

7. BUILDING UPGRADING AND THERMAL TOWARDS SUSTAINABLE HOUSING CONCEPT

Referring to the above condition, it seems that the local air temperature condition at Kemlayan Kampong is higher 5.6 - 8 K (in the morning), 1.4- 2.3 K (in the afternoon) and 0.5 – 4.2 K (in the evening) than outdoor air temperature. On the other hand, the indoor air temperature condition on some samples show that, in average, is around 27.5- 29.4^{o} C (in the morning), 28.3 – 30.3^{o} C (in the afternoon) and 27.0 -28.8^{o} C (in the evening). In the morning until afternoon the indoor temperature is lower 2-4 K than outdoor temperature. In the evening the indoor temperature is relatively similar with outdoor temperature.

In the coldest month, the indoor temperatures seem to be lower than those in the outdoor temperatures. These phenomena can be understood that the construction used in the building can role significantly in reducing the outdoor air temperature. The use of one layer of brick wall material that is commonly used at Kemlayan Kampong has an important role in improving indoor condition. That material can low the influence of outdoor temperature. Heat load from outdoor can be stored or absorbed by wall (heavyweight material) and then it is released at night. So, the heat reaches the indoor well after the period of maximum external temperature (Oke, 1978: 225). Based on the research result done by Santosa, M (1999, 2000) and Subarto V (1999), they said that heavyweight material can low the air temperature during the day and increase air temperature at night until early morning.

Santoso (2006) also indicates that heavyweight material can mitigate the increase temperature on building. During the hot days, indoor air temperature with heavyweight material can be lower than outdoor temperature 05 – 3.2 K. Conversely at nigh the indoor temperature can be little higher than the outdoor temperature around 2.5- 3.5 K (figure 9 and figure 10)

The other strategy in improving building thermal is indoor airflow into the building. From the measurement conducted in around kampong corridor (narrow pass away), the outdoor air velocity is around 0.0- 6.4 m/ s in the afternoon- evening and 0,0- 2,1 m/s with air temperature is around 29.1 – 33.3^{o} C. It means that kampong corridor provides an adequate air velocity for the environment. This outdoor airflow can influence and provide indoor air velocity around 0.0- 2.2 m/s. This condition is good enough when on 2 sides of kampong corridor is high walls. Those walls are assumed be able to reduce the air velocity into the building.

The use of thick wall is beneficial for building upgrading in reducing the indoor air temperature. On other hand, irregular building lay-out, inadequate open spaces, narrow street house access with high wall on the two sides, limited vegetation, narrow distance of building spacing, limited building opening, and almost similar building height can still provide adequate outdoor wind potential for indoor air velocity. Even the indoor air velocity in some cases is higher than that the outdoor.

8. CONCLUSION

The heating problem on high density plot settlement can still be controlled by building (human settlement) through passive (natural) cooling system to achieve a sustainable concept. The use of passive cooling system in building can minimize the use of artificial air conditioning system that can finally influence to the ozone layer damage. At high density plot settlement environment the building heating phenomenon is still possible to be controlled passively. From the study above it can be concluded that

1. The use of heavyweight materials can be considered in activities of building upgrading mainly in high density plot settlement
2. The use of narrow pass away and irregular building mass layout can also be kept to provide outdoor air velocity for indoor air flow.

By implementing those ways, people can minimize the using air conditioning system for preventing environmental heating. Finally by doing those strategy people can do a concept of sustainable at high density plot settlement simply.

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2-18

Community Empowerment in Waste Management System

Ir. Maya Andria Nirawati, M.Eng[33]

ABSTRACT

Slum area is always found as a part of an urban, where in the same time it becomes a serious problem of a city. Many ways have been done in order to help releasing the city from such problem, but it never last long. Slum area is often being connected with dirty, waste, and diseases. Especially when rainy season comes; slum area is used to be claimed as the cause, as well as the victim of the flood.

There is one effort to help the slum area which could be tried: "waste management". Waste in this term is divided as the waste of daily living (kitchen waste) and the waste of toilet activities. People should be taught the importance of healthy living. The simplest example is to separate the organics and non-organics waste. The community needs also to be encouraged to make bio-pores holes in their surroundings. These holes are used to restore the organics waste that would be processed by the worms into fertilizer of the soil. Moreover, the holes help absorbing the water to prevent the area from the flood; and keep the water in the ground which is needed when the dry season comes. While the collecting of non-organics waste of the community, is scheduled in a day of a week, organized by the waste collector in every neighbourhood association (Rukun Tetangga).
The proposed movements do not need expensive cost and it is an easy way to do; and the community empowerment to socialize the system is an appropriate simple approach in sustaining the slums upgrading in urban areas.

Keywords: *Waste management, organics waste, non-organics waste, garbage, rubbish, LRB, slum, community*

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1. INTRODUCTION

The growth of slum area in Indonesia began when the European came. The urban built slum housing from time to time and kept growing. In the 20th century the Government started the Kampong Improvement Programmed (KIP) in order to protect their living areas from contagious diseases that came from the slum housing.

In 1980 population of Indonesia was only 147.5 million people. Approximately 30.5 million people lived in 384 urban areas with more than 10.000 dwellers. Some of those, 21 million people lived in 42 urban area with more than 100.000 dwellers; where population growth was 4.26%/year[34].

The rapid of population growth was not counter-weighted with the provision of housing facilities. The Government could only provide 15% of the total housing demands. People built the dwellings on inappropriate land that caused the emergence of the slums.

In many slums, especially in poor countries, many live in very narrow alleys that do not allow vehicles (like ambulances and fire trucks) to pass. The lack of services such as routine garbage collection allows rubbish to accumulate in huge quantities. The lack of infrastructure is caused by the informal nature of settlement and no planning for the poor by government officials. Additionally, informal settlements often face the brunt of natural and man-made disasters, such as landslides, as well as earthquakes and tropical storms. Fires are often a serious problem[35].

When the rainy season comes, another disaster that is caused by poor waste management is “flood”; which is used to be followed by some diseases; such as dengue, malaria, diarrhea, lung problems, etc. Within the insufficient infrastructure and the lack of awareness of waste management, slums use to be blamed of causing the flood. But, in the same time this area becomes the victim of flood as well.

Although there are a lot of considerations regarding to upgrade the slums, there is a quite simple and an easy way to reduce the problem; i.e.: by using the community empowerment to manage waste disposal, provide bio-pores absorbing holes, use the dry organics waste (especially leaves) for bio-energy, and use other organics waste for farm-breeding food. These systems could be done as an attempt to reduce the flood disaster, especially in the slums.

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[34] *Peremajaan Lingkungan Perumahan Kumuh, Kantor Menteri Negara Perumahan Rakyat, April 1990.*

[35] *The report on shack fires in South Africa, Slum, Matt Birkinshaw. Wikipedia, the free encyclopedia, March 16, 2009.*

2. WASTE DISPOSAL

In Indonesia “flood” does not only occur in the slums, but also in adjacent areas. It could even be in elite real estates. Most of such disaster is caused by the accumulated rubbish (waste) in huge quantities. This means that waste could be categorized as a serious problem. Basically, the “waste” could be defined as household garbage of daily activities (organics waste and non-organics waste) and the disposal of toilets. But, the topic will be concentrated on the organics and non-organics waste.

2.1 Tendency

In daily life, it is found that “the slums accumulate garbage,” but, in the same time, “the garbage stimulates the emergence of the slums”. In Yogyakarta it is found that in garbage (waste) collecting place, emerge a group of an informal settlement (slum). The inhabitants tend to grow their community surround this sort of place in purpose. They took the illegal land and live side by side with the “rubbish” in assumption that they could make a living from it. Intrinsic, slums use to produce rubbish. So, between the settlement and garbage collecting place, a life-cycle has set. As being seen at KM 7.5 Urip Sumoharjo (Yogyakarta-Solo) road:

Figure 1. The slum emerged surround a mound of garbage

Source: private doc.

These pictures show ironical scenes, where the beauty of greenery is ruined by garbage collecting place. Instead of being abandoned, this area encourages a group of people to build a semi-permanent settlement. For the sake of earning money from the rubbish, they do not mind to live with the dirt. That also means living close to the diseases.

Along the river bank of Bengawan Solo in Surakarta (more famous as Solo) the similar ironic scene is also found. Adjacent to the bridge crossing to Mojosongo Ward, the mound of garbage could be easily seen. While the other side of it has already been constructed as a community small park, the rubbish is left as it was. When the water of Bengawan Solo comes up, the garbage is swept away along the river. And when the water comes down, the garbage will stay on the trees like decoration on the Christmas Trees. The park is built on the river bank (South side), lower than the street. In this case the view seen from the street is more to the garbage than to the park.

Figure 2. The scene of engawan Solo river bank
Source: private doc.

Another view which also proofs that the final pole of garbage generates the emergence of slum settlement, is found surround the area of Universitas Sebelas Maret (UNS); as shown in figure 4.

The house in figure 3 was erected in front of the garbage pole across the street. The dweller makes their lives by sorting recycled stuff to sell; such as bottles (glass and plastics) and other household utensils.

Figure 3. An informal Settlement adjacent to a garbage pole
Source: private doc.

The scenes in figure 4 also indicate that healthy environment is not considered as one priority. The rubbish could fly following the wind, which means that the air of the environment most probably is polluted.

Figure 4. A garbage pole adjacent to an access to UNS Campus
Source: private doc.

2.2 WASTE COLLECTING SYSTEM

The lack of legal waste management by either Government or Private Company, encourage various attempts to clean up the garbage from the environment. Starting from collecting door to door by a person pulling garbage box and bring them to bigger collecting area (in Indonesian it is called Tempat Pembuangan Sementara/TPS) - then the waste is moved by truck/garbage container to the final collecting place (Tempat Pembuangan Akhir/TPA). But, most happening is that the provided legal TPS and TPA are not enough to accommodate the debit of city garbage. As a consequence,

the TPS and TPA emerge illegally in any available areas; that then being followed by the emergence of the informal settlement in adjacent area.

The following figures show the "journey" of garbage, from neighbourhood area to the final (illegal) garbage collecting area (TPA). It is assumed as an illegal one since there is no sign board which states that the place is a TPA.

Figure 5. show the process of garbage disposing
Source: private doc.

In one neighbourhood association (Rukun Tetangga), there could be more than one garbage collector; depends on personal dealing. They do not take the waste everyday. Mostly three times a week. In Indonesia, the role of waste collectors is still demanded. There are only a few elite real estates in Jakarta which have already had collective waste disposal system.

3. ALTERNATIVE SOLUTION

Without any movement and management, such condition leads to worsen the living environment. Besides ruining the beautiful scenes the un-disposable rubbish will cause water puddle, even flood in certain situation. There are a lot of things to do and many aspects to consider reaching the sustainable slum upgrading. One step of those is by managing the waste disposal. Especially, some attempts to reduce the rubbish, which can be easily done by the community. People can help themselves to live healthier, free from the dirt and diseases.

3.1 GENERAL WASTE MANAGEMENT SYSTEM

While waiting the better solution, it is suggested to start separating the organics (kitchen garbage and the falling tree leaves) from the non-organics waste. The disposal of non-organics (bottle, ceramics, can, zinc, plastics, furniture, etc.) should be collected at a certain place (disposal box) and date-scheduling according to each item. The disposal box/container supposes to be built at the most accessible place, where the inhabitants could easily drop their stuffs. For instance:

1. Cans, bottles, and ceramics disposal date is Tuesdays of the first and third weeks of the moth.
2. The zinc, Styrofoam, and plastics are scheduled to dispose on Thursdays of the second and forth weeks of the month.
3. Furniture or huge materials will only be collected once a month on the chosen day.
4. While big amount of kitchen (wet) organics garbage, which needs to immediately disposed is collected every two days.

These activities should be managed by any neighborhood community; and every city should have at least one recycle station to receive and to recycle all those disposals. Such disposal system has been conducted in many countries, instead of Indonesia.

3.2 LUBANG RESAPAN BIOPORI (LRB)[36]

A quite new and low cost technology of waste disposal was introduced by Ir. Kamir Raziudin Brata, MSc. LRB is translated into English as bio-pore absorbing hole.

At the beginning Ir. Kamir R. Brata, MSc invented LRB was in attempt to conserve soil fauna, but in fact that the holes reduce the organics waste and

[36] *Lubang Resapan Biopori (LRB) was found by Ir. Kamir Raziudin Brata, MSc, who is a lecturer at Institut Pertanian Bogor (IPB); Kompas, Sabtu, 8 Maret 2008, p.16*

let the overflow water goes into the soil is another advantage of them. The fact that this technique helps preventing flood disasters, encourage the Government of Special Province, Daerah Khusus Ibukota (DKI) Jakarta[37] and Tim Biopori Institut Pertanian Bogor (IPB) to socialize the procedures of providing the LRB to the Wards (Kecamatan) and surroundings. Nowadays, LRB system has already been being used in Indonesia, mostly in Java.

The LRB does not replace the role of TPS and TPA, but helps to reduce rubbish at neighbourhood areas. In assumption that if LRB is made in appropriate ways and places, the duty of TPS, TPA and Recycle station would not be overload.

3.3 ABOUT LRB:

LRB is a vertical cylindrical hole with the diametric of 10-30 cm. The depth should be about 100-120 cm or above before reaching (above) the ground water level. The advantages of using LRB are:

a. The pores and the tunnel system of the soil which is formed by the worms, enabling the water to absorb faster.
b. Transforming the organics waste (wet garbage and the falling tree leaves) become plants/soil fertilizer.
c. Using the roles of worms activities and the plant roots
d. Preventing, at least reducing disaster impact from the puddle of water and the mound of garbage; i.e. dengue, malaria etc. (diseases).
e. Providing the water for the dry season.
f. Helping to reduce the impact of global warming.
g. Creating a healthy fresh living environment.

Figure 6. Lubang Resapan Biopori (Bio-pore Absorbing Hole)
Source: repro from Badan Pengelolaan Lingkungan Hidup Daerah Provinsi DKI Jakarta

[37] *Badan Pengelolaan Lingkungan Hidup Daerah Provinsi DKI Jakarta (The Living Environment Management Board)*

3.4 LRB TOOLS

a. The bore is used to dig the soil

Figure 7. Ir. Kamir R. Brata with the bore
Source: repro Kompas Sabtu, 8 Maret 2008, p.16

b. Hardener is used to harden the mouth of the hole. Cement could also be used.

Figure 8. Concrete hardener
Source: private doc.

c. Cover the hole using iron bars to ease inserting organics waste and step protection.

Figure 9. Plastics cover, iron/metal cover, hardener and cover
Source: Private doc.

3.5 THE STEPS OF MAKING HOLES

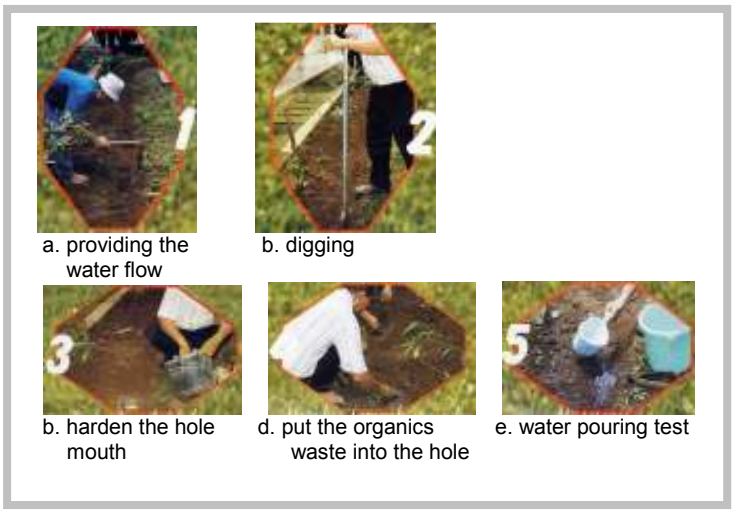

Figure 10. Making Process of LRB
Source: Badan Pengelolaan Lingkungan Hidup Daerah Provinsi DKI Jakarta

3.6 LOCATION

LRB could be placed on water drainage, surrounds the trees (triangle position), on the side of the streets, at the front/back yards. The distance between the holes is about 0.5 - 1 m.

Figure 11. Location of the LRB
Source: private doc

3.7 MAINTENANCE

a. Keep filling the hole with the organics waste.
   Within ± 2 weeks, the organics (wet) waste from the kitchen will

be ready to be used as plants/soil fertilizer (compost).

b. The organics (dry) waste will be ready to be used as plants/soil fertilizer after being kept in the hole for ± 2 months.
c. Use the bore to take the fertilizer out of the hole.

4. CONCLUSION AND RECOMMENDATION

Slums problems will not be solved with only socializing waste management including the LRB. Coordination among the government, stakeholders and developers is needed in meeting the demands of settling units. Not merely providing the land, the appropriate infrastructures are also important. But, it is a long term to afford. Regarding to the fact that the final garbage collecting area (TPA) tends to encourage the emergence of slums, it is important to pay attention to the waste management. Since the LRB system has many advantages, easy technology, safely to do manually, and low-priced; it could be proposed as one useful solution to help releasing the environment from the slums and the waste. It could be used in housing and in public areas.

Mr. Kamir R. Brata. invented LRB with some respective consideration to the life-cycle of earth. Logically, to handle small amount of organics waste is much easier than the big ones. One hole could accommodate at least 3 kg of organics waste. If every household could provide many LRB, automatically helps reducing social problem – the mound of “waste” in the TPA with all following disadvantages: bad smell, breeding place of diseases (mosquitoes, flies/bluebottles, rats), and pollute the environment. Moreover, the mound of garbage is not easy to be disposed and produce explosive methane gas.

Therefore, it is recommended to always separate the organics and non-organics waste and avoid putting the garbage all together in the TPA without any solution. Besides affording healthy environment, this approach avoiding the appearance of slums surround TPA. Remembering that the LRB is quite new invented technology, community empowerment could be used to promote and socialize the usage of it. With confidence that this movement has fruitful contribute to the sustainable slum upgrading in urban area.

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2 - 19

The Innovative Architectural Concepts and Building Components for Fishermen Settlements in Surabaya
(Study of Typological Form, Element and Architectural Component)

Dewi Septanti[38], Irvansyah[39], Wahyu Setyawan[40]

ABSTRACT

Provision of affordable housing for people who are generally classified fishermen economic weakness can be done through the design of the building that includes optimal space efficiency and selection of appropriate building components is a challenge at a time problem which needs to be solved together. This paper will describe research result on the user satisfaction and needs toward building component and social-economic aspect in fishermen settlements. The paper relevance is to provide the proposals and recommendations for the implementation of the concept of architectural and building components for the fishermen settlement in Surabaya, the proposed optimal utilization of local raw materials used, the draft guidelines of the house and the use of building elements and components that are suitable for low-income people in settlement of fishermen and the matrix of priorities, elements and components of the building that meets the needs of social and economic development for low income communities, with various forms of alternative building.

Keywords: building components, fishermen settlements

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1. BACKGROUND

Rapid urbanization and uneven urban development are continually contributing to the existence of slums settlements in urban areas. Surabaya, the second largest city of Indonesia with more than 3 million inhabitants, located in East Java, also faces problems within its slum areas, especially in fishermen settlements along the coast. Indonesia has more than 17.508 islands with 81.000 km coastal line which makes that more than 25 % of the people in Indonesia live in a settlement along the coast. (Dahuri,R, et all; 2001) The housing conditions in these settlements are improper for habitation; infrastructure, services and physical facilities are still limited; clean water is difficult to get and sanitation is improper. The population here has a *relatively low income level.* The majority of them is fisherman with a lack of knowledge about modern fishing technology and *low abilities and skills* which do not support productivity and diversification of their activities. Other economic activities take place in a traditional way and are limited to fish products only. Only *few* credit providing *institutions* are located in the coastal area settlements which make it even more difficult for the villagers to develop their economic ability (Dahuri 2001).

Diverse sustainable housing strategies, design concepts and building technologies have been developed all over the world, not all of them have shown to be adequate or widely accepted for implementation in tropical developing countries alike in the situation of the coastal areas of Java in Indonesia (ADB 2003).

'Formal' approaches as for example official housing programs often fail because of their lack of adaptation to the economical and social requirements of the residents. (UNHABITAT, 2003). The house should be flexible in social demands according to many households; home based enterprises are essential for a sustainable livelihood in some other developing countries (Graham Tipple, et.al, 2002).

1.1 Problem Statements

There is lack of appropriate architectural concepts and building components for low cost housing in fishermen settlements in urban coastal tropical settlements. From the description above, some of the problems have been examined are:

1. What kind of classification of housing typology, architectural elements and components in the fishermen settlements in Surabaya?
2. What kind of architectural components which meet the needs of the most social and economic community is seen from the level of satisfaction?
3. How is the innovative of architectural concept and building components for fishermen settlements in Surabaya ?

Research Objectives

The research goals are:

- to find typological form, architectural elements and components that are appropriate for fishermen settlements in Surabaya?
- to propose the innovative architectural concept and building components for fishermen housing in Surabaya?

1.3 Research Contribution

Results obtained from the wish to study later this is information on:

- To provide suggestions and recommendations for the implementation of the concept of architectural and building components for fishermen settlements in Surabaya.
- To optimize the used of local material.
- To proposed the requirements of housing design and the use of building elements and components that appropriate for low cost housing in fishermen settlement.

2. Literature Review

2.1 The theories

Turner's housing theory (1976) focused on the community's socio economic aspect. Turner has stressed the fact that elementary sources of housing can be properly and economically achieved by the people itself. This theory has the limitation consideration for technical, ecological and physical aspect. It means that the theory might not be applicable in some specific cases. Chattopadhyay (2009). Building Concept for Low Cost Housing is……. *"housing is not what it is but what it does in people's living ; people will be more tolerable with the deficiencies and imperfections of the house if they contribute more in the process of building of their own house, and both the process and the environment produced stimulate individual and social well-being"* (Turner 1976 page 5-6).

The housing by people concept (JF Thurner) is the basic concept that can not be applied directly to the practice housing development. Thus mean that every city/district should be developed this concept itself. The reasons to develop this concept are: Communities more understand with their housing problems.The problem orientation not only the physical condition (what it is), but the more important is their impact to the users (what it does); House is not the product but the process. Low income people needs to improve their house according to their future needs and demands, i.e.: the place for having the home based enterprises (HBEs) activities in specific context, the communities habit to re-arrange the housing plan, making additional rooms

and housing renovation related to their generation of income (Septanti, D, Room Utilization Pattern to Enabling Community's Economic by Home Based Enterprises, 2000).

Maximizing of housing opportunity requirements will sustain the communities where affordable housing already exists. The high concentration of subprime lending and foreclosures in low income communities undermines not only individual families but entire neighborhoods. The development and preservation of quality, affordable housing strengthens families and stabilizes community (Rubinger, M, et al, 2008).

Studies on coastal housing technology especially for fishermen settlements in the world have received much attention, but little exists in the literature on the used of architectural concepts and building components that appropriate with low cost housing for fishermen settlements in similarly local context. The few available studies include those of Wilbanks(2005), Wiseman(2008), Khrisna (2005) and Septanti(2008), Marfa'i et. al (2007) and Kobayashi (2003).

The housing should be affordable for low income community …."directly depends on the income level of its owner, renter or tenant and his purchasing power. Community's income level is related to the overall income level in the country and the possibilities to finance adequate housing facilities. In practice every household itself decides which percentage of income will spend on shelter" (Gaillard 1996).

This means that the housing technology according to sustainable lifespan of low cost housing will be focused at community's economical and financial abilities of the inhabitants, its means that the housing product should be flexible to adapt community needs, cheap and easily to maintain.

2.2 Basic Concept of Settlement

In practical, more about 90% of housing held by the communities itself, while only 10% done by formal institutions. Contain a formal definition: a housing that is presented on the rules that can provide by government and or private sector. Non-Formal contain: a housing that built by community itself with the traditional process (Source: Course notes). Following by the statements, the basic key of the housing and settlements development is the communities itself.

2.2.1 Basic concepts of Fishermen Settlement in Case Study Area

Referrals regulation based on Land Use in Area Surrounding Suramadu Bridge 2005, the fishermen settlement will be improved with some public facilities included the facilities to support tourism activities.

According to Rapoport, housing and its environments are the community's experience about: religion, family, social structure and social relationships between individuals, community etc. House is a building that serves as a residence or dwelling and the means of the household.

He also said that the housing and human settlements are clearly the expression of the importance of relativity that shows the difference aspects of life and the varieties of reality ways. Houses, villages and cities the reality of community groups who receive shared goals and values of life. House and settlement is an expression of cultural and social power of a symbolic nature. Following by Rapoport, the settlement was formed by the influence of social values, e.g.: community, local culture, etc. It is shown the picture of a group by different goals and ways of life.

Architectural elements are the one of signs for people and its civilization. YB Mangunwijaya in his book Wastu Citra said that: "The architecture is speaking in the sense that the human element with expressed elements, with the material and the form of composition. Simplicity, truth, and efficiency will determine the quality of particular community's architecture language.

The house is built for a man, so that it was something that always supported by the community's human life in a certain period. The housing development should be concerned about the use and image. Use is how it can function as useful, while the image is a picture that created the housing from that reflects who the user is.

According to Imam Santosa (2003), deviation of architectural value always occur from several time. This factor is influence of architectural essence: the 'space concept'. Thought about the 'space', according to philosophical, symbolic, and formalistic has started many centuries ago. Based on some of the references obtained, 20th century was the peak of the various researches on the space, particularly associated with the science of architecture (it is marked by the birth of the Movement Modern Architecture and Interior 1925). Architecture is a product of the culture formed to cover human needs, so that some changes and the shifting value that does not occur irrespective of socio-cultural issues. However, as a cultural product of value, then the architecture is always required to adapt to the various phenomena that occur in people with the condition in time.

2.2.2 "Kampung" as Fishermen Settlements Form

According to Silas (1988) village is a unique form of settlement where the low income people lived. The population can be spread across the city. Kampung can also be defined as the village/ hamlet or the group of un-standard houses in urban area.In addition, Silas J, also argued that the settlement is a territorial habitat where the population can still perform biological, social, economic, political activities and environmental sustainability to ensure a balanced and harmonious.

3. METHODOLOGY

3.1 Research Framework

This research will be split up with three research questions, which will be elaborated below. In order to understand the problems of design and technical aspect related to architectural concept and building components of low cost housing, we need to know about typological form, architectural elements and components that used for low cost housing in coastal settlements in Surabaya.

The study therefore begins with general picture of fishermen settlements in Surabaya in order to show the housing problems in its environmental, socio and economical context. The research also wants to know the indicator and requirement of architectural concepts and building components which are relevant for environmental and socio-economic aspects.

The first stage is to answer the first sub-set of research question (reserch problems): “What kind of classification of housing typology, architectural elements and components in the fishermen settlements in Surabaya?”
In this stage, we will try to find the housing type following by roof type, the used of housing elements and components that genarally used by communities.

The second research problems is “what kind of architectural components which meet the needs of the most social and economic community is seen from the level of satisfaction?” will be shown by the communities satisfaction level.The community’s satisfaction according to material used will gained by interviewing. Data have been collected to found the occupants satisfaction level, with the comfort ability followed by building components. The occupant’s satisfaction data have been gained by Post Occupancy Evaluation (POE) with structural questionnaire and by the interviews. Data would be treated by multivariate analysis to clarify the several level of community’s satisfaction with several conditions. Multivariate analyses were also done to assess the relative importance of various factors in predicting satisfactions (Chattopadhyay 2009). Data will be shown as a scale or percentage of the community’s satisfactions.

Instead taking data by communities interviews with Post Occupants Evaluation and pre-occupant interview (community that have been resettled), field observation will be reached. This observation is to dig the parameter of present housing condition, environment and socio-economics. Besides that, the regulation, geographical and other supporting data have be found by deep interview of the housing stakeholder. All stages are to understand the general condition of coastal settlements in the case study area.

This part will be answered by the third sub-set research questions: How is the innovative of architectural concept and building components for fishermen settlements in Surabaya?

Following the last research stage, the results should find the requirements and indicators for the basic design and building components for low cost housing in the study area.

3.2 RESEARCH SET UP

The methodology that is most suitable for solving the key research question and following sub-set research questions contains both qualitative and quantitative aspects. The ongoing research will be executed by exploratory and correlational research. According to Kumar, R (1996), the first type of exploratory research is to clarify why and how there is a relationship between two aspect of situation or phenomenon. While, the correlational research is to discover the existence of relationship between two aspects , i.e architectural concepts and building components for fishermen settlements in Surabaya.

The research will be applied in case study areas at fishermen settlements in Surabaya, Eastern Java, Indonesia. These include the following sub-districts: Tambak Wedi, Kedung Cowek, Bulak Banteng, Tanah Kali Kedinding, and Sukolilo Barat Surabaya.

4. RESERARCH RESULT

4.1 Typological Form of Fishermen Settlements

Traditional architecture is not static, but formed by repeated norm processes. Settlements are mostly fishermen who built their own society by using the more traditional pattern. So that, the housing that built by community will occur through the stages of the process based on the user needs and financial ability.

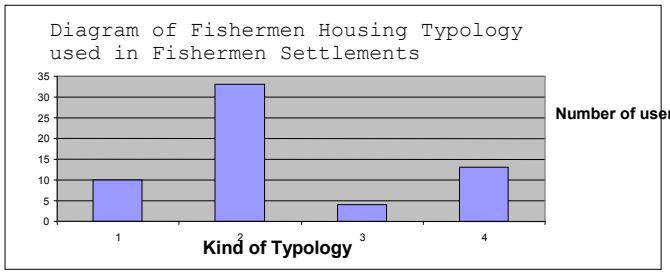


Figure 1. Diagram of Fishermen Housing Typology

From the results of the research conducted with the kind of typology is as follows:

1. *Pelana*-type house without canopy in front terrace
2. *Pelana*-type house with canopy in front terrace
3. *Perisai*-type house without canopy in front terrace
4. *Perisai*-type house with canopy in front terrace

Following the table above can be seen that:

1. The used of *pelana*-type house with canopy in front terrace is preferred by the community. According to the functional form of the house, this type is easiest in the processes, so that will be influence the working-time and cost of the house.
2. Percentage of this home with *pelana*-type house with canopy in front terrace reach 55% of respondents overall. And followed with the *perisai*-type house with canopy in front terrace(21.67%), *pelana*-type house without canopy in front terrace (16.7%) and *perisai*-type house without canopy in front terrace (6.7%).

4.2 The architectural components that used in Fishermen Settlement in Surabaya.

As discussed in literature review, the architectural elements are the signs for people and their civilization. In fishermen settlements, the elements of the architecture (building components) that used also to adjust the community's conditions and levels of knowledge, needs and financial ability.

Following the research results that have been illustrated previously, known that fishermen community used various architectural elements to formed walls, roofs and floors. Based on that, the houses in the fishermen settlements divided by:

a. Walls Main Components

From the survey results in the field study following on the satisfaction level of users for the main material used to formed the walls classify into 5 groups:

- White Stone, the value of the satisfaction level is 5
- Red stone brick, the value of the satisfaction level is 4
- *Jati* wood and the similarly material, the value of the satisfaction level is 3
- Plywood, the value of the satisfaction level is 2
- Bamboo, the value of the satisfaction level is 1

b. The Wall Shield Main Components

Component that used to form wall shield, can be determining by the community satisfaction that classified into 5 groups:
- Brick walls covered by another component e.g.: ceramics, the value of community's satisfaction is 5.
- Brick walls covered by cement, plastered and painted; the value of community's satisfaction is 4.
- Teak walls and some similar material, the value of community's satisfaction is 3.
- Un-covered red/white brick walls, the value of community's satisfaction is2.
- Walls material made from bamboo/plywood, the value of community's satisfaction is 1.

c. The Floor Main Components

Component that used to form the floor, can be determining by the community satisfaction that classified into 5 groups :
- Ceramics, the value of user satisfaction is 5.
- Terrazzo, the value of user satisfaction is 4.
- Ordinary cement stucco, the value of user satisfaction is 3.
- Material of timber, the value of user satisfaction is 2.
- The compacted land, the value of user satisfaction is 1.

d. Ceiling Components

The used of ceiling is to reduce heat that coming from the roof and also as a barrier of the rain. Comfort and beauty of the room will be affected by this component. Therefore ceiling considered as one of the variables to be measured. For this component, the results of field studies by determining the level of satisfaction, then classified into 3 groups with the highest 5 points, namely:
- Closed the whole, the value of user satisfaction is 5
- Closed in part, the value of user satisfaction is 3
- No closed, the value of user satisfaction is 1

The variables can be shown the level of user satisfaction about the used of building components.

4.2.1 Use of Building Components in the House on the Damaged Condition to the Year-15

From the results of the survey conducted on 30 respondents with the condition of damaged houses after 15 years of data obtained that:

Table 1. Table average satisfaction level of the building components that are used

Building component	The average levels of user satisfaction
Walls components	3.63
Shield wall components	3.43
Ceiling components	3.73
Floor components	3.46
Average value	**3.56**

The diagram shows that the use of building components in the house with the damage/poor condition in fiftieth years is as follows:

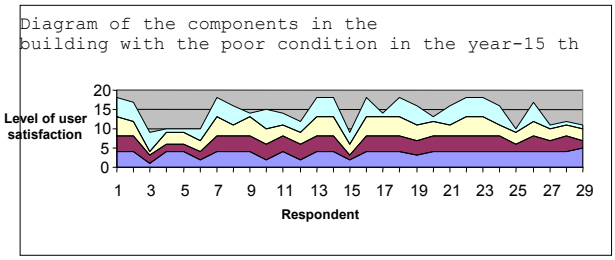


Figure 6. Diagram of the components in the building with the poor condition in the year-15 th

Following the diagram above, it can be concluded that:
1. In several respondents, show that the level of user satisfaction is very low.
2. There are other factors that affect the condition of the house considering the number of respondents expressed high level of their satisfaction levels for building components that are used.

4.2.2 Use of Building Components in the House on the Good Condition to the Year-15

From the results of the survey conducted on 30 respondents with the condition of damaged houses after 15 years of data obtained that:

Table 1. Table average satisfaction level of the building components that are used

Building component	**The average levels of user satisfaction**
Walls components	3.8
Shield wall components	3.46
Ceiling components	3.63
Floor components	4.53
Average value	**3.86**

The diagram shows that the use of building components in the house with the good condition in fiftieth years is as follows:

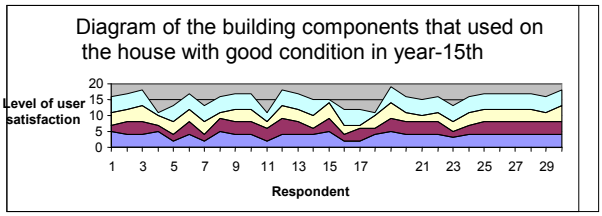


Figure 6. Diagram of the building components that used on the house with good condition in year 15-th

From the diagram above, it can be concluded that:

In some respondents, show that the user satisfaction level is very low for the components that used to built the house. However, the condition of the building was good enough after 15 years. Other factors that may occur:
- The subjectivities of the user
- Community's knowledge about building quality components is low.

Architectural components for the most appropriate and meet community's requirements for their needs, social and economic aspects are seen by the level of user satisfaction. The level that the user has a value is 4. It can be explain that building components that meet the criteria are: the use of red brick with plaster, plafond component must cover the entire room, and the use of tiles cover the floor e.g : ceramic, terrazzo.

4.3 The Innovative Architectural Concept and Building Components for Fishermen Settlements in Surabaya

The economic condition of the fishermen is generally in low income level. This is consequently for them to require more selective in terms of:
1. Selection of the cheap building component but can be use in long period (can use up to 20 years).
2. The determination of the concept and architectural design should be efficient.

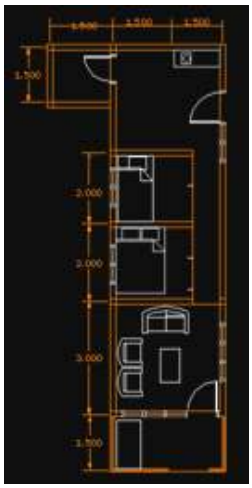
3. Adjustment with typologies of the existing building will be easier to construct the house. This will ultimately reduce the cost of construction process.

In general, fishermen settlement is not different from the other settlements. Fishermen house doesn't need some more over space to perform their work (as fishermen or seafood processer). This reason because they conducted their activity on the 'shared communal space'. The fishermen communal spaces are usually located closed to the sea. After fishing, the sea product will be processed in communal space or sells directly to the middlemen.

Community who live in fishermen settlements can be classified based on the type of work:
1. Fishermen who fish and process their product.
2. Fishermen who fish but not process their product
3. Non-fishermen, but they process the sea product.
4. Non-fishermen, but they have home based enterprises at home
5. Non-fishermen (regular household)

Based on the five types of work that classified, type no-1(fishermen who fish and process their product), type no-3 (non-fishermen, but they process the sea product) and type no-4 (non-fishermen, but they have home based enterprises at home) require a special space in their house for their activities. Meanwhile, type no-2 (fishermen who fish but not process their product) and type no-5 (regular house hold) do not need space for special efforts.

Based on divided group above, the proposed concept, design and architectural component that is suitable for them are :
1. The first (which requires a special space for business activities). The proposed house is including with the businesses activities following:
- House with *pelana*-canopy type that accordance with the most houses in fishermen settlements.
- Simple architectural design that influence construction process, materials and time work.
Open space can be done in terrace or front field to conduct home based enterprises activities.



Occupation: fishermen who fish and process their product; non-fishermen, but they process the sea product; non-fishermen, but they have home based enterprises at home.
The number of people: 5 inhabitants
The house size: 3.5 m x 10 m

Proposed Design
• Open architectural design to give plenty space for business and domestic activities.
• The red brick can be use as main wall materials and covered by cement plaster shield.
• The ceiling should be covered by some materials.
• Cross ventilation and natural light design can be created to form the healthy house.

2. The second group which does not require a special space for activities)
- House with pelana-canopy type that accordance with the most houses in fishermen settlements.
- Simple architectural design that influence construction process, materials and time work.
- Open space does not need for business activities. Terrace can be used for domestic activities.
Occupation: fishermen who fish but not process their product or regular house hold.
The number of people: 5 inhabitants
The house size: 3.5 m x 10 m

Proposed Design
• Additional partition can be use to separate the boundary between house and field.
• The red brick can be use as main wall materials and covered by cement plaster shield.

• The ceiling should be covered by some materials.
• Cross ventilation and natural light design can be created to form the healthy house.

Figure 8. Proposed architectural design concept and components for group 2 houses

5. CONCLUSIONS AND SUGGESTIONS

5.1 Conclusion

From the research have been conducted, some conclusion can be follows below :
1. The typologies of fishermen housing more dominated by *pelana*-canopy type, with consideration: easier to construct that influence by worker time and material used. The reason will be influence for construction cost.

2. Architectural components that appropriate and meet community's requirements can be seen by the user satisfaction level. It is can be explain that the community more like the material used following as: the use of red brick with plaster, ceiling component must cover the entire room, and the use of tiles cover the floor as terrazzo, ceramic etc.

3. Proposed design typologies must be considered the building criteria and the proposed building component.

5.2 Suggestion

This research should be support by other researches in different angle and background. Meanwhile, the implementation of proposed research result needs to be supported by the housing stakeholder who interest with the housing and human settlements in slums coastal areas.

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SUB TOPIC 3

Sustainable financing and economic development for slum communities in the urban area

3 - 1

Community Empowerment in Self-Help Housing Program

Yanti Budiyantini[1]

ABSTRACT

A major policy challenge facing Indonesian housing authorities today is the development of an approach to housing provision for low income people which usually live in the slum area. Since the government has a limited access to its funding, and various programs that support to increase the community investment are limited only for productive sectors or higher income people; the community participation could be an innovative approach to increase their investment in housing especially for the poor. Self-help Housing Program (*Program Perumahan Swadaya*) is created to promote a participatory approach in managing housing finance for low income people. Small teams of people live in the neighborhood and work with the community to address local issues in relation to their housing problems. The economic situation has limited their ability to invest in the housing, but energies has been redirect into social and community activities aimed at housing provision based on community participation through revolving fund system. After two years program, in Bandung as a case study, there was a significant increase in the housing provision, housing finance, and slum upgrading. This paper argues that participation leads to community empowerment which is closely related to the historical and socio-economic reality of the community is the potential asset of city to provide funding in housing provision and slum upgrading. To explore new ways of thinking, learning from the experience based on community participation and their culture needs to be socialized for all stakeholders, as for strategic actions of the government in housing provision.

Keywords*:* community empowerment, housing provision and slum upgrading, self-help Housing Program

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1. INTRODUCTION

Urban growth is closely connected to the growth of urban population and to several infrastructure facilities that are necessary to support urban living. The higher the population growth rate, the higher is the need for urban housing. Providing a supply of housing for the poor is an important economic and social function of the city, since they do not have adequate access to housing finance. A major policy challenge facing Indonesian housing authorities today is the development of a comprehensive approach to the provision of good quality and affordable housing, especially for the poor which usually live in the slum area. The rapid increase of the urban population means that the need for housing will substantially increase in coming years. There is a pressing need for policy-focused research to provide the research foundation for a comprehensive, integrated, innovative approach that will deliver good quality housing choices for the poor.

Since the government has a limited access to housing finance, and various programs that support to increase the community investment are limited only for productive sectors, and not for consumptive sector such as housing; community participation and empowerment based on their culture could be an innovative approach to increase their investment in housing especially for low income people. Community with their culture is a potential asset of the city development.

This study will scope this potential issue of community empowerment, through evaluations of Self-Help Housing Program's achievements to cope the housing problems based on the principle of sustainable development. Firstly, the study analysis will identify the program achievements in economic aspect. This will essentially address the question, Is the program increase investment in housing provision, and appropriate to the needs of the poor? And, is the program can be developed to promote efficient public and private sector investment in housing provision for low-income, including new partnerships between the public and private sectors? Secondly, the analysis of social aspect will address the consideration of democracy, justice, and sustainable principles in the program. And the last, analysis of environmental aspect will address the increasing of people sense on the need for good quality housing and their urban living.

2. HOUSING PROVISION AND SLUM UPGRADING THROUGH SELF-HELP HOUSING PROGRAM

Bandung Metropolitan Area has experienced a very rapid urbanization; the growth rate of the total population has been increasing, while the supply of housing was sluggish. This resulted in housing shortage, especially for low-income people which are also facing the slum condition. In order to expand

housing provision and slum upgrading in this area, the government formulated a Self-help Housing Program in 2006 as a strategy to increase funding for housing provision and slum upgrading. The objective of the program is to establish new way of formulating and implementing community empowerment in local public policies. One community organization is actively involved in the program. The government established a revolving fund of Rp 1.250.000.000 for housing provision and quality improvement, and Rp 750.000.000 block grant for public infrastructure through the Local Government to set up programs to address the housing problems. The program sought to improve living conditions and increase the organizational capacity of urban poor through the promotion of community savings and credit groups. The community saving is used to provide integrated loans at favorable interest rate as wholesale loans to the community. Through the revolving funds, for the first phase, 50 houses were chosen to be improved its quality (total of Rp 250 million investment), and 100 new houses were built (total of Rp 1 billion invesment). In only one year, there was a significant increase of the community fund. The increase of its fund has been invested in 10 new houses and 5 houses to be improved its quality, as a second phase. Furthermore, in the second year, it increased to 12 new houses and 8 houses to be improved its quality.

The process of the Self-Help Housing Program was conducted among various stakeholders: The Housing Ministry of Indonesia appointed the Local Government to identify and choose community organization which would be involved in the program based on several criteria. The community organization that has been chosen should identify and make priorities to choose who would get the first fund among the poor community. The community organization then supervised for the poor for their housing provision and quality improvement program. The list of the household and the housing programs was sent to the Local Government to be verified. The verified program sent to the central government, and then the community organization delivered the fund to the community after the fund was received.

The project has seen the improvement of housing conditions, and it also motivated the community to increase their living condition and its public infrastructure. Micro-credit facilities have been made available to the poor. One of the most important results has been the engagement of a wide range of actors. All activities have taken into account gender participation. The community organization intends to extend the program to all slum areas in Bandung District, through housing provision and slum upgrading based on the revolving fund, while strengthening the approach towards regularization of land tenure.

3. COMMUNITY EMPOWERMENT IN HOUSING PROVISION AND SLUM UPGRADING

According to Lyons (2001:1225), the generic view of empowerment is “any process by which people’s control (collective or individual) over their lives is increased”. It follows that ‘empowerment’ relates to power relations and, as a result, the term is rarely neutral. Like ‘partnership’, ‘empowerment’ is a discursive construct, its assigned meaning resulting from the exercise of power. It sees the essential characteristic of empowerment as “the process of helping a *group or community* to achieve political influence or relevant legal authority”. The ultimate target, it is implied, is independence by the community from external agents in formulating its agenda and managing its affairs so that, ultimately, only funds need be transferred from donor to agent. The process involves capacity building, particularly in management skills, transfers of authority from donor to recipient and support for new initiatives by stakeholders.

A well-functioning housing system is essential in expanding effective demand for housing and improving the housing condition. Adequate finance for urban infrastructure and it operation and maintenance is prerequisite in ensuring that cities function effectively as the engine of growth (Kim, 1997:1597). Finance was viewed as a tool for achieving these policy goals of addressing inequality, but in earlier years, many internationally driven housing and slum reform projects that simply concentrated on engineering and construction solutions failed because they were not sustainable or appropriate in developing country environments (UNCHS-Habitat, 2003:71). They failed to consult with and involve the people for whom they were intended. Social cohesion is critical for societies to prosper economically and for development to be sustainable. Incorporating the poor within the design and implementation of development projects not only helps to produce more appropriate projects, but also ensures that they are better targeted to reach those with the greatest needs. There has been a substantial literature that decreased slum environments are not only influencing the health condition, but also influencing the life chances and social behaviour. From the point of view of basic economics, it is cheaper to provide targeted social services to poor people if they are participating in the projects.

In order to be sustainable, the project should be conducted in line with the practiced principle of sustainable development, through the integrated implementation of the economic, social and environmental aspects of development which should be conducted by all the stakeholders of urban development.

On the economic aspect, it is closely related to the cost and economic value of the development to be carried out. In the event of limited funding for housing provision, the program based on its community empowerment shows the increasing of housing provision, housing finance, and creating the

community's sense of program ownership that would in turn allow maintenance and develop the program to be carried out in a self-help manner. Through such participation, the public and private sector investment in housing provision was developed and even enhance by the community themselves.

From the social aspect, the following three principles need to be taken into consideration: democracy, justice and sustainability. Participatory planning, by which the public are invited to participate actively since the planning process, is the solution to provide a democratic value in the formulation of sustainable planning. The principle of justice is exercised through the transparent implementation of planning as it would ensure the proportional distribution of benefit and cost. Furthermore, the principle of sustainability puts emphasis on generating the people's awareness of the importance of long-term planning which comprises the need to create innovative way of exploiting resources, in order for the resources to be passed on to the others and the next generation.

On the environmental aspect, the sense of good quality housing and its urban living should be determined by the wishes of community who in developed countries have mostly already comprehend the meaning because of their being relatively well educated and having sufficiently economic conditions, as compared to the urban inhabitants in developing countries. The provision of good condition housing has the objective to provide good quality of urban living.

On the other hand, the problem with self-help program is that it is relatively slow to implement and depends upon the cooperation, goodwill, resources of residents, their government and other stakeholders. But, the best practice for addressing the challenge of housing and slums in developing countries is now through participatory improvement (UNCHS-Habitat, 2003:132).

4. DISCUSSION

From the above described cases, it becomes clear that it is necessary to obtain the understanding and appreciation from the community relating to the increasing of housing provision, housing finance, and the quality of urban live. Community awareness and appreciation would emerge following an action or movement that stimulates sustainable development.

To generate community participation, action of several external motivators is necessary, assistance by the local authorities. It will continue to the community that they were able to manage the program without intervention from the authorities. The community organization was established together with the regulations that were accountable to the

community. To establish the organization, it also required active participation from the people to develop social solidarity to ensure proper function of the community organization. It has become conventional wisdom that communities need to be involved both in designing what is to be done and in implementing it, and that the best policies work through genuine partnerships.

The ultimate goal of housing finance is to improve the housing condition of all income by providing the widest possible range of housing option. In reality, however, formal sector housing finance in many countries offers very limited support to house provision for the poor. In order to maximize the contribution of housing finance, to promoting home ownership, and to improving housing condition, it is important that the government provide subsidies. In this situation, small, short term loans for home owner wishing to extend and improve their houses can be highly effective in increasing the provision of low-cost housing as well as improving the overall quality oh the houses. Therefore, micro-enterprise development can be a logical starting point in addressing the problem of inadequate housing condition of the poor.

5. CONCLUSSION

In conclusion, the effective of housing provision and slum upgrading is based on a number of key principles:

1. Well targeted government interventions in the urban sector can foster communities to create more productive urban livelihoods.
2. The active participation of the urban poor in decision-making promotes effective formulation and implementation of local action plans.
3. Principles of equity, civic engagement and security are keys to success.

The main achievements of the Self-help Housing Programs are:

1. Increased community organizations and networks.
2. Increase community assets and direct financial resources. At the same time, community-based saving groups have mobilized.
3. Increase community management and enterprising capacity: Having established their resources base, communities have been able to create linkages and partnerships with other groups and develop the confidence necessary to initiate and implement activities to improve their living conditions to form effective partnerships with local authorities and private groups.

Lesson learned from the program include the following:

1. The experience provides evidence that access to credit is one of the main barriers preventing the urban poor from developing their living

conditions. It also demonstrates that community-based savings and credit for housing is one of the effective means to do so, as it allows people to lead more productive lives.

2. The management of community funds for housing and slum upgrading programs should be designed on the basis of the conditions of the poor, not on the basis of the market and bureaucratic agencies.

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3 - 2

Home Based-Enterprises as an Income Generator for Low Income People: Toward a Sustainable Financing and Economic Housing

Wido Prananing Tyas[2]

ABSTRACT

Housing is one of many human basic needs. Housing sector is important as US financial crisis -and it is fear that will led to a global crisis- has started by a collapsing of housing and property credit. When housing sector can be seen as a cause of a crisis, on the other hand, economic can be developed by housing sector. Generally, houses is interpreted as consumptive and phisycal issues, specifically to protect human, as well as to develop family and social relationship. However, it should be seen that houses can be productive: as an income generation, specifically for low income household. A home based-enterprise is interesting to be explored, specifically toward a global crisis solution.

When an economic crisis hitted Indonesia in 1998, a lot of people loss their formal jobs, such as in banks and industry. However, such informal jobs has give another alternative for income generation. Some of informal sector are started by a micro or small indutry which uses part of houses for enterprises activities. The role of Home based-Enterprises for income is important to be explored. A study of home based-enterprises in Semarang City depicts the role of home based enterprises for a sustainable financing and economic housing.

Keywords*:* home-based enterprises, income generation, productive

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1. INTRODUCTION

Rapid urbanization needs an urban management. Otherwise, it will increase many problems such as pollution, traffic jam, and slums. 'Cities without Slums' as one of many goals in this millenium. However, it needs hard work to achieve this goal. Housing is a basic needs for human, but slums tend to increasing and mushrooming. Economic crisis is also threaten poverty level increased and new slums emerged.

Slums can be viewed as an effect, and the real problem is poverty, and low of access to reach resources. Therefore, to solve the slums is basically starts to do something in root problem, namely to reduce poverty. In consequence, give access to increase income is the most important part.

This paper is basically propose the importance of home based enterprises as a way to increase income for low income group. Therefore, a sustainable financing and economic housing for the residents can be achieved. The first stage is by conducting literature review related to economic aspect of housing, home based enterprises, and the context of sustainable development concept, sustainable housing and settlement and home based enterprises. The next stage is by a study of Nairobi, Kenya which has a slum upgrading project that support the existing resident's economic activities. It has sustained jobs, even created new jobs and increased housing standard simultaneously. Slum upgrading in Pekunden and Bandarharjo also shows the economic activities in the lowest level flats, evenmore in their unit. Finally, the end of part is conclusion and recommendation.

2. LITERATURE REVIEW

Economic Aspect of Housing

Housing is not always a consumption matters, however it also has a production aspect, as Laquian in Kellet, et al (2000):

> *"If there is one lesson for planners in the massive literature on slums and squatter community life, it is the finding that housing in these areas is not*
> *for home life alone. A house is a production place, market place, entertainment centre, financial institution and also a retreat. A low income community is the same, only more so. Both the home and the community derive their vitality from this multiciplity of uses.."*

A critique of Home based enterprises is basiccally on impact on environment, especally on pollution , which difficults to control , because usually Home based enterprises are based on a small scale industry/production(Tipple, 2004). However, the home based enterpises

capability to generate income is important, due to their capability to be alternative to generate income for low income people.

1.2.1 Home Based Enterprises Characteristic

Home based enterprises are basically implemented by the owner, as Lipton(1980) states that Home Based Charecteristic are:

1. the family controls most of the land and capital to which its labour is applied
2. Most of the family's land, capital and labour are used in the enterprise; and
3. most of labour applied is provided by the family

Furthermore, typology of Home based Enterprises are:

1. Selling point to sell good or service for daily life such as small shop, coffe bar, or barber shop.
2. Small industry to producing, or finishing good/products

Tipple study (2005) shows that home based enterprises characteristis have similarities with informal sector:

- Flexibility and various activities
- Small scale
- Low wages
- Informal relationship between distributor, consument, and state
- Lack of skill
- Low Initial budget and access to credit
- Production and consumption is not separated

Spatial Aspect of Home-based Enterprises

Regarding micro-spatial aspect, these enterprises use a small proportion of houses. According to Tipple(2004), empirical studies in 4 countries (Bolivia, India, Indonesia, and South Africa) shows that space for domestic activities is in between 68-80 %, and the rest is for business. However, as stated before that one of Home Based Characteristic as bothly consumtion and production aspect cannot be separated. In doing so, the conflict of the domestic and productive aspect is possible.

At a macro level, spatial aspect can be depicted by distribution pattern. Based on Strassmann(1986) states that Home based Enterprises productivity depend on several aspects, based on empirical study in Lima, Peru:

> *"..but their productivity depends on access, cost of space, density of settlement, and other neighbourhood characteristics..". (Strassmann,1986)*

This means that distribution can be affected by access, density and local characteristic.

Community Development and Home based Enterprises

Small enterprises is one of ways to develop community. Therefore, business development can be started from the easiest way, from home. With a small initial budget, enterprises develops gradually. Consequenly, income is a part of this enterprises, both household and regional scale. This means that this informal sector contributes to economic development.

3. SUSTAINABLE DEVELOPMENT: SUSTAINABLE HOUSING AND SETTLEMENT AND ECONOMIC ASPECT

Sustainable Development is firstly, promotes the balance between economic and ecologically interest. Through Brutland Agenda, the social aspect, then becomes the third aspect of sustainable development. Related to sustainable development, a concept of sustainable housing and settlement is developed(Tyas, 2007). Figure 1 below depicts economic aspect of sustainable housing and settlement, which basically promotes sustainable welfare, especially formed in increase income

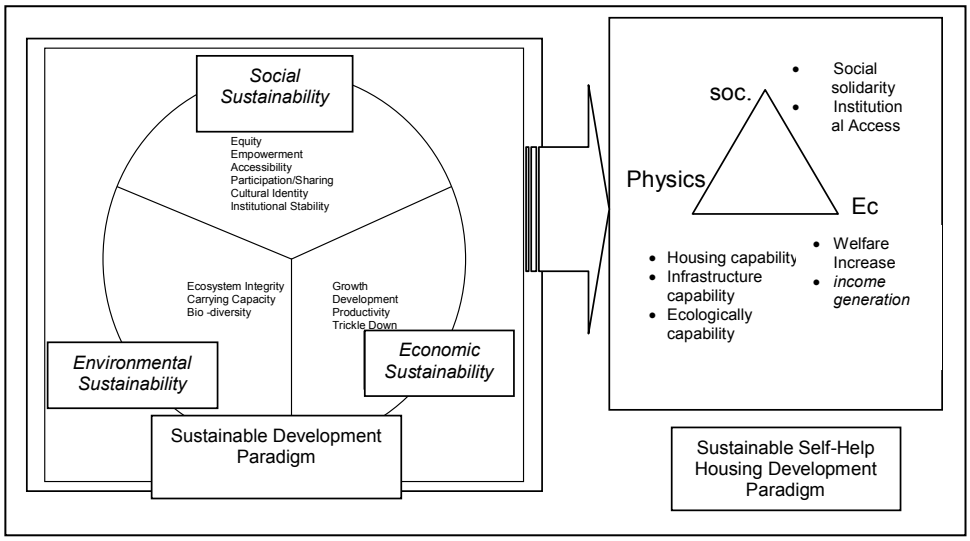

Figure 1. Sustainable Housing and Settlement Pradigm

4. SLUM UPGRADING AND HOME BASED ENTERPRISES

In Nairobi, Kibouchi (2001) it was stated that squatters rehabilitation project that support Home based enterprises has created jobs and housing .

Source: Kibouchi, 2001

Figure 2. Home based Enterprises: before and after Slum Upgrading Project

Therefore, the key success of maintaining economic activities in Mathare's slum upgrading are as follows:

1. All development stakeholder involvement to succeed, as stated that:
   "To curb both problems, international donor agencies urge governments to employ policies that combine shelter provision with job creation….. Governments are also encouraged to cooperate with non-governmental organizations, community based organizations and residents in an effort to create jobs and provide affordable housing. …."
2. Government Roles and Policies which support slum upgrading:
   "Such policies can relax building codes, making housing affordable and remove barriers that inhibit the growth of the informal sector. Mathare 4A Housing Project is employing such policies and has managed to produce upgraded and affordable shelter by relaxing building codes and using inexpensive, local building materials. The Project supports existing HBEs, creates jobs and raises standards of living. The rehabilitated enterprises have better shelter and infrastructure, are more efficient, accessible and competitive, and have diversified the neighborhood economy…."

Pekunden and Bandarharjo Flats, Semarang are developed to provide housing with a better housing standard. Nowadays, such economic zone at lowest level are formed in foodstalls or fresh market. Even more, there is a small shop in a unit as depicted in figure. This shows that economic activities are can be accommodated, not be abandoned.

Source: Observation, 2008

Figure 3. Economic Activites Zone and Home based Enterprises in Pekunden and Bandarharjo Flats, Semarang

Home based Enterprises which are based on industry or production of goods are also found in Bugangan, Semarang. Small industries produce stove, pans, and oven, which some of them use houses for production. Furthermore, small enterprises (included based at home) which sell services is easy to be found in developing countries.

Many of woman as the owner of home based enterprises, can conduct their business at home, close with their childeren. At this point, woman's role to contribute to increase income for household is important.

5. CONCLUSION

It can be concluded that, home based enterprises is one way to achieve sustainable economic and housing for the residents. Therefore, it needs supports from all development stakeholder, specifically government to sustain and increase economic activities, eventhough it is in an 'informal' way. Relaxing building codes, specifically in building uses permits is one way to promote homebased enterprises. In slum upgrading project, design such economic activities zone is a worth policies to support sustainable housing and settlement.

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3 - 3

Financing Slum Upgrading in Indonesia: Can Sustainability Reinvestment Help?

Agung Sugiri[3]

ABSTRACT

Sheltering for the urban poor of developing countries, like Indonesia, has been facing problems. Slums, characterised by crowded, unhealthy environment, poor quality buildings, and lacking public facilities and infrastructure have been of much concern. Around 24-62% of urban population in developing countries live in this kind of housing with no sign of decreasing trend. Despite promising progresses, sustainability is still the main challenge for slum upgrading, in which financing is an important aspect.

The paper seeks a theoretical foundation of utilising sustainability reinvestment scheme, a somewhat forgotten function in Indonesia, to help financing slum upgrading. Sustainability reinvestment is among the methods of ensuring intra- and inter-generational equity in development, in which a significant portion of development benefits is reinvested for sustaining development. It is usually applied for restoring environmental damage caused by the development activities based, among others, on polluters pay principle. However, since hardly are people living in slums out of their freewill, inequity in development process must have something to do with it. Slum inhabitants are most probably deprived from their rights to get equitable benefits from development.

Therefore, the application of sustainability reinvestment can be extended to include financing slum upgrading. By this, slum upgrading becomes an integrated part in ensuring sustainable development. Among the policy implications is tax policy reformulation. A new post in the tax yield, namely sustainability reinvestment pool, can be created. Equitable

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compensation for slum dwellers should be available from this post, and this would help financing slum upgrading.

Keywords: intra- and inter-generational equity, slum upgrading, sustainable development, sustainable financing.

1. INTRODUCTION

Slum upgrading has become a favourable alternative solution to increase the quality of life of slum dwellers. However, slum demolition without proper resettlement program is still preferred by many local governments. This is especially so in Indonesia, despite its former successful experience of slum upgrading –KIP (*Kampung* Improvement Program)- in Jakarta.

This introduction shows the importance of sustaining slum upgrading, and is also completed with the objective, the method, and the organisation of the paper.

1.1 Slum Bulldozing versus Slum Upgrading

A group of people gathered together in front of the World Bank office in Makassar, protesting the practices of slum demolition, recently widespread in Indonesian metropolitan areas and big cities (WALHI, 2004). These people, mainly the worse off citizens like the urban poor, informal street vendors, victims of slum bulldozing, and students, were coordinated by KMMAP (Makassar People's Committee on Anti Deprivation). They even expanded their complaint to include refusal to all World Bank initiatives on urban development, especially the "cities without slums" program, which they blamed as causing slum removals without proper resettlement programs by local governments. While their rejection to the World Bank programs is most probably because of some misunderstanding (see e.g. Dasgupta and Lall, 2006; World Bank, 2000), their suffering of being displaced from their homes is real.

The upshot of the incidence is clear, that slum bulldozing is most certainly not the best option for local governments. This, however, has not been the case for Indonesia. Centre on Housing Rights and Eviction, for example, has identified Indonesia as a country with the highest incidence of slum removals, mostly done in Jakarta, in 2003 (Hartiningsih, 2005). From 2000-05, the Local Government of Jakarta has forced more than 90,000 slum dwellers to move out from their homes, and threatened another 1.5 million of the urban poor. The Jakarta Government also made more than 20,000 '*becak*' drivers and 60,000 street vendors lost their jobs in that five year period.

Slums are often deemed as merely a housing disorder by urban local governments of Indonesia because of their illegal nature in land tenure.

Furthermore, the ugliness of slums due to the crowded, poor quality buildings, unhealthy environment, combined with lacking public facilities and infrastructure has made the authority keen enough to eliminate them. Thus, to upgrade slums or to provide resettlements is considered too costly. Besides, upgrading would mean allowing the dwellers to stay there illegally, something paradoxical. Slum dwellers are considered as having no rights to stay. So, as far as the local authority is concerned, rather than to cure the disorder, it is much easier to remove it.

However, pondering on the concerns of the slum dwellers, slum removals would most probably make the worse off worst. Around 24-62% of urban population in developing countries live in slums with no sign of decreasing trend (UN-Habitat, 2008 in Servants, 2009). It is indicated that many slum dwellers are in worse situation than their relatives in rural areas (UN-Habitat, 2006). By bulldozing them, at least two disadvantages would emerge. First, slum bulldozing would decrease the housing supply and make the dwellers unsheltered. Rather than going back to their origin in rural areas, these unsheltered urban poor would most probably find other places to quickly build their new slums. Slum bulldozing has been proven by experience as unable to eliminate slums (Painter *et al.*, 2006). Second, slum dwellers usually run their economic activities not too far from home. Removing them would cut their opportunities, and thus reduce the urban economic potential itself.

This is also paradoxical because slum dwellers, although deprived, are not without economic potential. Not only are they potential consumers in the urban economy, but potential producers as well. Slum dwellers are engaged in informal, small and micro enterprises, which are low productive. However, an interesting proposition is stated by Prahalad (CHF International, 2008: Appendix 4-2), that “If we stop thinking about the poor as victims or as a burden and start recognizing them as resilient and creative entrepreneurs and value-conscious consumers, a whole new world of opportunity will open up.” Integrating the informal activities of slum dwellers into the urban economy in terms of strengthening the opportunities, by giving them fair access to micro financial assistance, for example, is thus among the important strategies of urban development.

Slum upgrading, therefore, is much more preferable than slum bulldozing in implementing “city without slum” program. It is true that slum upgrading is usually more costly than slum removal. It also needs more effort and time, however, these investments are effective and productive. While slum removal would most probably end up with similar new problem in other parts of the city, slum upgrading can resolve it. By slum improvement, slums can be converted into good quality settlement without relocating the dwellers, so that maintaining their economic opportunity. Slum upgrading can also empower the community to renovate and develop their housing with their own resources. Suitable and inexpensive housing for the urban poor, rather than a decline in the housing supply, is thus the main outcome of slum upgrading (Painter *et al*., 2006).

1.2 Challenge to Sustain Slum Upgrading

Progress in slum upgrading has been made so far, however, sustainability is still the main challenge (Serageldin *et al.*, 2003). Indonesia, for instance, has a successful experience in slum upgrading. *Kampung* Improvement Program (KIP) of Jakarta, also known as Muhammad Husni Thamrin (MHT) project, was initiated in the late 1960s (*Kompas*, 2000) when the deceased Ali Sadikin was the Governor. KIP is often considered among the best practices of slum upgrading in the world, and in its peak performance in the 1970s, KIP was able to upgrade up to 2,000 hectares per year (Chavez *et al.*, 2000). However, the program is unsustainable due to some reasons discussed in this subsection.

Chris Banes, the former Municipal Engineer at the World Bank, expresses that "never has any other slum upgrading project been as successful as the KIP and improved the quality of life of such a large part of the population" (Chavez *et al*., 2000). KIP has played a significant role in increasing the quality of life of slum dwellers through providing access to affordable facilities and infrastructure, and improving urban environmental quality. Banes continues stating that the inhabitants "are now better educated, household size has declined, and more residents are employed." (Chavez *et al*., 2000).

Key factors to the success of KIP can be inferred from the experience (Chavez *et al*., 2000). The first is that the initiative came from the Governor Ali Sadikin, which was then supported by the community. This is essential, because self awareness is just like bottom up initiative that can help empowering local community. With the improvement and provision of affordable infrastructure and facilities, the communities were encouraged to renovate and build their houses with only a little help from the government.

The second factor is good management. KIP was managed under a special, multidisciplinary unit, i.e. the KIP Unit, containing motivated experts from a wide range of skills needed in slum upgrading. This was as a response from the Governor when he realised that the original structure could not work optimally. Officials who worked in the unit were much better paid than the usual public officials as a consequence of the more intensive work load. The "*gotong royong*"[4] culture and the leadership structure of the community, which is extended to as low as neighbourhood level (*Rukun Tetangga*), have contributed to the good management.

The third factor is financial and management support from the World Bank, which started after the first five years of KIP. Banes highlights that the Bank's support has been able to scale up the slum upgrading (Chavez *et al*., 2000). KIP then became nationwide program in big cities of Indonesia, like in

[4] *Gotong royong* literally means work together voluntarily. This is the behavior of Indonesian people since a long time ago.

Bandung, Surabaya, Semarang, etc. with shared funding from local, national governments and the World Bank.

Challenges are there, however. First, it is hard to replicate the success of KIP in other developing countries. An important factor for the difficulty is the different cultural and political structures. Many national governments are reluctant to upgrade slums because it is like forcing them to legalise the dwellers' illegal land, although as known, it was not the case in Indonesian KIPs (Chavez *et al*., 2000). For those with such kind of reluctance, recent proposed strategies by the UN-Habitat (2004), one of which is to integrate slums into the urban development plan, may fix the problem. Indonesian experience is on the contrary. When people saw that the government was improving the facilities and services without forcing them to leave, they became eager to fix their land tenure problem.

Second, KIP is later on found to be unsustainable. The maintenance has not worked as expected. Problems, like solid waste filling the drainage channels, the clogging of drainage ditches, and the cracking of roads, appeared not long after the improvement finished (Chavez *et al*., 2000). Apparently, the cause is that the Local Government of Jakarta, who is responsible for the maintenance, does not have enough fund to keep the improved infrastructure and facilities in their proper condition. The similar situations happen in other big cities of Indonesia.

In short, financing is among the keys to sustain slum upgrading. This may however be the most important one in Indonesia.

1.3 The Objective, the Method and the Organisation

The paper seeks a theoretical foundation of utilising sustainability reinvestment scheme, a somewhat forgotten function in Indonesia, to help financing slum upgrading. Sustainability reinvestment is among the methods of ensuring intra- and inter-generational equity in development, in which a significant portion of development benefits is reinvested for sustaining development.

Literature study is the method of this essay, through which opportunities to integrate sustainability reinvestment into the Indonesian taxation system are searched. The main results are principles and steps that are needed for tax policy reformulation, the implementation of which can help ensuring the sustainability of slum upgrading in Indonesia.

This paper comprises four sections. This introduction is followed by a discussion on equity, sustainability reinvestment and slums. The discussion will show that to sustain development, ensuring intra- and inter-generational equity is needed, and sustainability reinvestment plays an important role on that. It will also be identified that inequities will not only threaten the environment, but also create slums.

Section three discusses opportunities to increase the tax capability in funding slum upgrading, especially through expanding the use of sustainability reinvestment. Afterwards, the last section concludes.

2. EQUITY, SUSTAINABILITY REINVESTMENT AND SLUMS

Improving the quality of life of slum dwellers can only be sustained in the framework of sustainable development. This awareness is encouraged by the UN when defining the Millennium Development Goals (MDGs), among which is the target "to have achieved a significant improvement in the lives of at least 100 million slum dwellers by 2020" (UN, 2008: 43).

Meanwhile, sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Intra- and inter-generational equity is thus essential to be ensured. The application of intra-generational equity is needed to be able to meet the present generation's needs, while inter-generational equity is to ensure the same or better opportunities for future generations to meet their own needs.

It is thus important to discuss how development can ensure the application of equity. This is done in the first subsection, with special emphasis on the role of sustainability reinvestment. The second subsection then discusses how equity failures share to slum problems.

2.1 Equity and Sustainability Reinvestment

The importance of equity application and sustainability reinvestment is obvious when considering sustainable development framework as seen in Figure 38.1. The model is based on natural resource dominant economy like in Indonesia (Sugiri, 2005).

The model explains how the three types of capital, i.e. natural capital (Kn), physical or human-made capital (Kp), and human capital (Kh) work together to generate welfare sustainably. The development process comprises four functions where equity should be applied. Therefore, defining equity is important.

Equity, as far as development is concerned, can be defined as fairness in the process of development and justice in distributing the outcome (Rawls, 1971). There is no dispute about this, since it can be seen that, in the development process, every actor has its own, specific function determined by its own potential and effort, and mechanisms in the socio-economic system of the community. The development mechanism is a socio-economic system, within which the process of accruing benefits, distributing them to the stakeholders, and efforts to sustain the system are involved. Every

person has his/her potential and limitations to function in the system, which can be perceived as unique if one looks into the details.

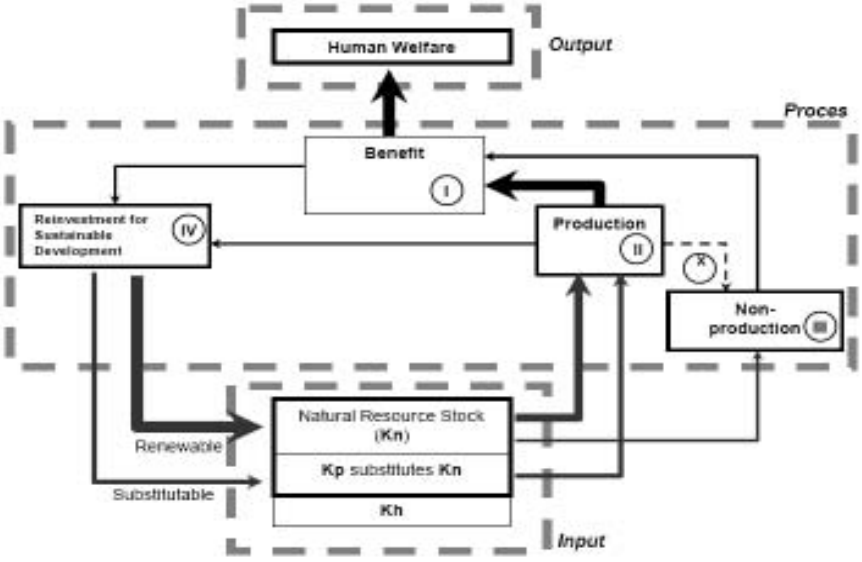

Figure 1. A Simple Model of Equity Based Development (Sugiri, 2005)

Notes:
I : Equity I
II : Equity II
III : Equity III
IV : Equity IV
All arrows represent positive flows, except the 'x' arrow which is negative externality, i.e. the negative impact of the production function to the non-production function, however, it is hardly captured by the market mechanism (the market failure).

In terms of these specific functions of the people, inequality exists. This meaning can better be understood if, as suggested by Sen (1992), human diversity and the range of focuses are considered when examining equality. Inequality, which exists because of the differences in natural human characteristics such as "age, sex, proneness to illness" or "inherited fortunes" (Sen 1992:1), without any injustice in socio-economic relationships, may not be a problem. Meanwhile, pursuing equality of a variable may cause inequality in another related variable. This conveys a message that it is important to assess equity in any analysis of inequality, because inequality that occurs without any unfairness may not need attention.

Fairness is incorporated when all development actors share the same opportunity of accomplishing their specific functions. It is the initial opportunity to complete their specific jobs that is to be distributed equally,

but not their functions, nor their achievements are to be equalised. If their opportunity is not made equal, then the development itself would not be fair or optimal. When equity is properly applied, everyone is not necessarily equal, but everything is put in its proper place. It is like the allocation of components that make a personal computer work. One cannot put the processor into the RAM (random access memory) slot and vice versa. Thus, personal income, for example, may not be equally distributed, but, no one would complain about another person's higher income. This is because people do not feel any injustice in the inequality.

Therefore, justice in the distribution of development benefits would mean that certain kinds of basic benefit should be distributed equally, especially with regard to fundamental human needs. World Bank (2005) asserts that poor people stay in poverty because of inadequate access to schools, health centres, roads, market opportunities, credit, effective risk-management mechanisms and other empowering services, to indicate that certain aspects of benefit need to be distributed equally. On the other hand, other kinds of benefit can be distributed unequally, depending on the extent of importance of the recipients' performances in the development.

The first function in the development process is the distribution of development benefits to the people. Intra-generational equity should be applied in this function (equity I), the failure of which would end up to poverty and deep inequality, because:

- First, the majority of people would be deprived in terms of low welfare level despite their hard work (equity failure Ia), and
- Second, unfair access to public infrastructure, facilities and services could occur (equity failure Ib).

The second one is the production function. Failure to guarantee intra- and inter-generational equity (equity II) in this function would also cause deep inequality and unsustainability.

- First, it is because fairness is not properly applied in the access to natural resources as a production factor (equity failure IIa).
- Second, unfair competition in the economy could occur that would make a few stakeholders better off at the expense of the majority (equity failure IIb).
- Third, natural resources may be so exploited that threaten their sustainability of use (equity failure IIc).
- Fourth, negative externalities of economic activities could create serious threat to the environment (equity failure IId).

The third function is the non-production function, a function of the natural environment that cannot be substituted by the physical capital. Failure to apply inter-generational equity (equity III) in this function would cause unsustainability. Equity in this function means that a certain amount of natural capital should be kept constant, or otherwise the assimilative and carrying capacity of the environment would be damaged (equity failure III).

Sustainability reinvestment is the fourth function. Failure to apply equity (equity IV) in this function would cause unsustainability, because:

- First, many people would bear negative externality costs with no or inappropriate compensation (equity failure IVa).
- Second, insignificant sustainability reinvestment would be insufficient to maintain the ecosystem (equity failure IVb).

The model shows that sustainability reinvestment is mainly intended to keep overall capital stock in its constant functionality. By utilising sustainability reinvestment, the environment can be kept functioning well to support life, renewable resources can be appropriately renewed, while exhaustible ones can be substituted properly by either physical capital or other natural resources or both. Also, the function of human capital can be kept stable or even increased. This makes it possible to enhance the applicability of sustainability reinvestment to help financing slum upgrading, which will be discussed in the next section. Meanwhile, the next subsection discusses the relationships between equity failures and slums.

2.2 Inequity and Slums

Among the nine equity failures discussed previously, those related to benefit distribution and sustainability reinvestment are the most relevant with slum problems. It is easy, for example, to find that many slum dwellers are actually hard workers, but they earn so little money that is not enough to alleviate them from poverty (related to inequity Ia). Also, it is common that hardly can slum dwellers get basic infrastructure and facilities properly (equity failure Ib). UN-Habitat (2006) recognises that apparent dualism exists in cities of developing countries, where on one side the inhabitants have all the urban benefits, while on the other side, the urban poor live in even worse situation than their rural relatives.

With regard to sustainability reinvestment, which is needed as a function to mainly correct the inequities, slums are usually neglected from any compensation by, for instance, a nearby pollutive industry (inequity IVa). Even worse is that sustainability reinvestment has never been a focus in Indonesian development (inequity IVb). That is why slum dwellers would be the most vulnerable to urban environmental degradation.

Other equity failures may also be related to slums, although may not be so close as the above four failures. This can be inferred from the expected results of slum upgrading, one of which is to increase slum dwellers' economic opportunity, as discussed previously. This is related to solving the problem of unfair competition (inequity IIb). UN-Habitat (2006) has also noted that job applicants from slum dwellers are less likely to be called for interviews than those from better-off neighborhoods.

Having understood that slum dwellers are most likely victims of equity failures, it is fair to say that those responsible for the inequities should

contribute in financing slum upgrading equitably. This can be facilitated through expanding the use of sustainability reinvestment, accommodated in the taxation system.

3. EXPANDING THE USE OF SUSTAINABILITY REINVESTMENT: TOWARDS TAX POLICY REFORMULATION

Tax is a transfer of money from individuals and private sector to the public sector under conditions stated in the tax regulation, without the payers receiving direct benefit of equal value (Mangoting, 2001). The returned benefit for the tax payers is mainly the accomplishment of the country's social and economic objectives.

So, as far as the people is concerned, there are at least two main objectives of taxation (Cobham, 2007). The first is for redistribution purposes. A country like Indonesia would guarantee its people to get their fundamental needs, and assure them fair access to get more wealth, which would depend on individual capability and effort. This would make Indonesia embrace the principle of equity discussed previously, i.e. fairness in the development process and justice in the distribution of benefit. To be able to do this, redistribution is a must, and taxation is very useful for this purpose.

The second one is for country's revenue, which is needed to finance governmental expenditure in accomplishing the country's objectives. Expenses like routine official payroll, maintenance and operational cost of governmental facilities, and expenditure to facilitate development, are financed by government revenues, an important source of which is tax.

Therefore, with such kind of importance, the Indonesian taxation can be reformulated to help financing slum upgrading. This section proposes principles and steps needed for tax policy reformulation, which is based on the idea of revitalising and expanding the use of sustainability reinvestment.

3.1 The Principles

Expanding the use of sustainability reinvestment to help financing slum upgrading should be in accordance with certain principles. First, market based instrument (MBI) should be utilised in this case. This is because taxation itself can work properly if it is integrated within the market mechanism (see the re-pricing objective of taxation in e.g. Cobham, 2007).

Second, the tax payers should be well identified. This is a common principle of taxation, that is to maintain fairness in the tax collection. For the specific purpose of helping to finance slum upgrading, the tax payers should be those who are better off because of inequities Ia, Ib, IIb, IVa and IVb as previously discussed.

Third, a specific pool of tax collection for sustainability reinvestment should be created in the taxation system. This is the pool for taxes accrued from those benefitting from equity failures in the production and non-production functions, as well as in the benefit distribution (see Figure 38.1).

Fourth, an equitable arrangement should be made in distributing tax yield for the many purposes of the government. This is needed to avoid externalities that can reduce the effectiveness of taxation policy because, as known, "optimal policy involves correcting externalities" (Kopczuk, 2009: 3). A portion of the sustainability reinvestment pool can be used to help financing slum upgrading. Careful calculation can be made based on the extent of the three equity failures (Ia, Ib, and IIb) most related to slum problems.

3.2 The Reformulation

The existing framework of Indonesian taxation is somewhat complicated, although it is much better than before the amendments of the taxation laws (Brondolo *et al*., 2008). It is constructed by so many regulations, like Act No. 6/1983, amended by Act No. 16/2000 regarding the General Rules of Taxation, Act No. 7/1983, amended by Act No. 17/2000 concerning the Income Tax, Act No. 8/1983, amended by Act No. 18/2000 regarding the Value Added Tax, and more than five other acts and their amendments, and many other lower level, provincial and local regulations.

However, sustainability reinvestment has never become the focus. There are no environmental related taxes, nor taxes meant for correcting market failures or driving corporations to internalise the negative externality.

This may be because in dealing with unsustainability problems, instead of MBI, command and control (CAC) has been the sole approach for a long time. Environmental regulations, like the pollution control for industries and other polluting activities, and standard ambient air quality, are determined and enforced on obey or shut down basis. When a polluting industry, for example, exceeds its maximum quantity of pollutants, warning is issued. After several warnings without compliance, the industry may have to be shut down. With CAC approach, it is difficult to correct market failures characterising most environmental problems, which should be integrated in the taxation system (more on market failures and MBIs, see e.g. Tietenberg, 1996; O'Connor, 1994). Closing down polluting businesses is not the proper solution because it would impede the economic growth.

On the other hand, corporate social responsibility (CSR) which has been popular recently, is often considered enough to solve social inequality problems. There is no hesitation that CSR is a good initiative from private sector, however, it is first of all just like a charity. The portion of private benefit spent on CSR is not regulated. Moreover, CSR is only useful for the

surrounding community of a private business, while what is needed is to remedy the inequities which is nationwide or even global.

Recent effort has however been made by the Indonesian Government through proposing an act applying some kind of pollution tax in sub-national and local taxation. This is a significant initial effort to implement MBIs by applying the polluters pay principle. However, the Indonesian Parliament refused the proposal, uttering that the proposed law is just like allowing industries to pollute (*Kompas*, 2008). This is an obvious misunderstanding, however, it is widespread in the Indonesian decision makers.

The problem of policy making, not only in developing countries, but also in developed ones, is that policies are formulated by a governing body, not by a prominent planner (Battaglini and Coate, 2006). Therefore, the reformulation should start with a national awakening on the importance of sustainability reinvestment. This can be done through various means of dissemination, like conferences involving public, private and community representatives, and also public commercials on media. The initiation should be encouraged by academics and researchers by conducting relevant studies supporting the need to utilise sustainability reinvestment, and publishing the results.

The next step is for the government to propose enrichment in the existing taxation system. Pollution tax, for example, can be re-proposed to get approval from the parliament, which at this stage is well-informed about the significant of sustainability reinvestment. However, the law proposal should be enhanced to not only deal with controlling pollution, but also the need of taxation for sustainability reinvestment as a whole.

4. CONCLUSION

It has been shown in this paper that sustainability reinvestment, which is usually applied for restoring environmental damage caused by the development activities based, among others, on polluters pay principle, can be extended to also help financing slum upgrading. This is because hardly are people living in slums out of their freewill. So, equity failures in development process could contribute in creating slum problems. Slum inhabitants are most probably deprived from their rights to get equitable benefits from development, and sustainability reinvestment can help fixing the problems of inequity. By this, slum upgrading becomes an integrated part in ensuring sustainable development.

It has also been discussed that among the policy implications is tax policy reformulation. However, enrichment should be made in the Indonesian taxation system to accommodate sustainability reinvestment. A new post in the tax yield, namely sustainability reinvestment pool, can be created. Equitable compensation for slum dwellers should be available from this post, and this would help financing slum upgrading.

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3 - 4

Women's Role in Economic Development to Improve Lives in The Floating House of Tempe Lake

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ABSTRACT

The government asked women to be involved in the effort to face the world's crisis impacts. One of them is by supporting women's movements for food diversification, energy saving, and creative economics. According to the statistical data, 60 percent out of 85,4 millions of small section of men power are *females*. Besides that, for the effectiveness of the family's economic, women are the best one. A lot of facts proved that the wives are capable to do their best effort to support their family's economy. Starting from small businesses to the bigger ones. The skill and the capacity of women's role is not just a nature or biological opinions as commonly debated. This one is depends on the want and studying its potential aspects. Let alone if it is supported by adequate transportation facilities in the land area. And how is the women's role in the improvement of family's economics living on the water?

The existence of the women's community in the floating house living on the lake water in Tempe Lake at the first stage was to accompany their husbands and doing the household chores on the water. For years the family's economics were depend on the husband to make the end meets as a fishermen with relatively small incomes. The limitation of water's transportation is not a hindrance for the housewife to take a role to be involved to help their husbands in the creative economic process to advance

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their family's standard of living. The involvement of the housewives have been proved to give a positive effect in improving fishermen family's economic in the floating house in Tempe Lake.

The aim of the research is to find women's role in developing family's economic to enhance their standard of living in the water settlement environment. The ethno-architecture research approach is used, so that the result of the research is in the form of artifact (physical track of the settlement) and reveal the meaning of the settlement's culture which developed on the water in the view point of the system of people's creative economics living in the water.

Keywords : economics, floating house, women's role

1. INTRODUCTION

Based on the reality that historically, culturally, awareness, perception and behavior ,there are many opinions or debates concerning women's role in the society. The unequal role between men and women is influenced by the applied norms, religion interpretation and socio-culture construction which regulates role allocation, attribute, stereotypes, rights, obligations, responsibility, and perceptions toward men or women.(Susanti, 2008). Besides that, marginalization, discriminations, and subordinations towards women made their power of competition in many aspects of life became very low. The combined stagnation of no access to economics ways, social, and power faced by the poor women caused the raise of feminization of poverty. Let alone, to enhance the fulfillment of women's economics rights is one of women's basic rights. Women's economics rights should be functioned so that it is hoped that their quality of life and their family prosperity will be raised gradually (Hatta, 2008). Besides that, it has been conducted into some affirmations in order to raise women's role in the economics developments, such as integrating women's importance into many development programs.

Nevertheless, the awareness of the importance of using women's public rights mainly in the field of economics, and because of the attention of pressure and exploitation of women in their field of jobs, has given a positive effect in women's life (Hatta, 2008), Besides that, family's tendency in supporting this awareness actions has been accepted enough in the developing countries like Indonesia. The consequence of this awareness is in lines with the equal attentions toward men and women, in order to see and discussing again concerning the public role of women in the society (Rahman, 2005).

In the natural environment of the countryside, the women's role will become very crucial in supporting their family's economics which is

traditionally handled. Women's involvement in the production process such as doing the farming, fields, or as a fishermen, has been existed in our traditional society in the countryside, including the role of the women who live on the water. Although at the first stage, it is limited on the production process, but later, would directly involved in the marketing process.

The role of the women who live in the floating house in Tempe Lake of South Sulawesi in helping supporting their family's income, is not just natural decision and also not a biology decision either. The decision in doing the public role, besides domestic role which has been applied so far, is potential discovery which is still learned and still be processed in years adapted with their living on the water. The limitation of education, knowledgement, and means of transportations is proved not be influenced significantly in supporting their husbands in doing many economics activity done on the water. Besides that, several public roles which are uncommon done by women in the urban area, has been done properly by the mothers and women in their floating house.

2. WOMEN'S ROLE

Women's profile is described as a human being who must live in the dilemma situations. In one side, women is asked to take part in all sectors, but in the other side, it is asked for women for not neglecting their 'natural destiny' as a woman. Such demands have made women carried doubled burden. Women's role which is constructed by people socio-culture in destiny, the interpretation is biased becomes something which is patched on women and becomes women's self image. The image then gradually formed by the government in Family Prosperity Counseling (PKK) through Five Women Association (Panca Dharma Wanita), the government has been legally applied the concept into five roles. Firstly, Women are the husbands' companion. Secondly, Women are mothers of educators and young generation's counselor. Thirdly, are the economics' administrator. Fourthly, are bread winners companion, Fifthly, are members of society, in women's association, public social, and the like that contributes the society (Susanti, 2008).

In the reality of the life, destiny is not merely done by women and doubled role is not a new thing. Since they were young, women is educated to be survived and support their family by working. The industrial development has made women in poor condition, the machines and skilled-workers has replaced women in their jobs. In the field of job, women are lack- of- skill worker, thus, women are limited by cultural norms on the filed of job which properly done by them. It is different with men who are able to choose many kinds of jobs and educations to support their jobs. Let alone,

women, specially the poor ones, are the main workers equal to men in their family. In fact, women are always claimed as the bread winners companions.

3. THE REMOVAL OF WOMEN'S ROLE

3.1 As a Result of Economics Conditions

The family's matter in the people of the countryside aroused since the economics matter has come and the chance of looking for a job are more open. In the past, people who live in the countryside, the chance of women in looking for a job is limited, either its kind and its place, women are supposed to obey their husband commands. However, nowadays, the norms which has been applied by the countryside's people are gradually changed due to the economics' demand which are urgent. The economics' urgency has caused women can not only work in their domestic areas, or helping their husbands doing the jobs in the farms or yards. The public sectors which have already been dominated by men, has been an interest to women. The openness of variety of job vacancy in the urban area nowadays has also influenced the interests of women in the countryside specially those who lived in the slum areas. The informal domestic sectors such as to be a house maid is their first choice, the uneducated and low-skilled women, is one of the causes to be a house maid abroad. The fact showed that ever since 1980s, the sending of working women abroad has been conducted so that the husband's role which initially be the beard winner of their family's economics role has been removed by their wife's role in earning *dinar* or *ringgit.*

3.2 As the Result of Absolute and Structural Poverty

The removal of the women's role besides of the family's demand which becoming hard, but also as the struggle of absolute poverty which happened in the family's environment in generations and the struggle of structural poverty which so far has been claimed caused by the government. The women's poverty is influenced by tradition factor, religion, and gender with the complex and negative implication on women's health and education status. The women's struggle and the want to end the poverty that faced by them and the fact that there are many well-educated women caused women stared to take the role in the public sector, such as supporting their husbands or be the main brad winner. According to Ruth Alsop and Andrew Norton (2004) in *Poverty Reduction, Power, Rights, and Poverty" Concepts and Connections,* poeverty in categorized as something which is against with human's basic rights. For that reason it is conducted women's resources. The women's resources can suppress the poverty's digit by changing and improving women's lives. The resource is a combination between two factors which are tied each other that is agency and chance structure. Agency is an

ability of a person in deciding his or her own real choice. While chance structure are many kinds of aspects which make makes a person to be able to do because of his ability to choose. Many proves showed that a woman has an ability to decide to do a business in a small scale to a bigger scale has proved to solve their family out from poverty (Sen, 2004).

4. WOMEN'S ROLE TOWARDS FAMILY'S ECONOMICS IN THE FLOATING HOUSE

The Economics' Activities in the floating House

The economics' activities which done by community in the floating house on the water is strictly related to women's role. Not only the domestic economics' activities but also the public economics' activities. The economics' activities of people living on the water are in the informal economic factors as fishermen catching on the fish, cultivating the fish, handling the fish and selling the fish. The fishermen doing the activity to catch the fish by using one-machine boat on the lake, in the morning time until night time. The tool which is used to catch the fish is called *jala* (casting net) and *jabba* (fish's trap made of iron). To the fishermen, the fish can be cached throughout the lake areas except the cultivated fish areas which are called *Palawang* and *Bungka*. The income money from the selling of the fish will be used to spend the family's daily needs or part of them will be sold to the fish dealers. To the fishermen who cultivate their fish, the fish is cultivated in a basket on the stream which is surrounded by what it is called *belle* (made of bamboo's sticks which are implanted on the lake's ground to support the fish). The place is called *Palawang*, the location is on the lake's side. While the cultivation which on the middle of the lake using the water's plants which circulated by using bamboo's sticks implanted in the middle is called *Bungka*. The cultivation in *Palawang* and *Bungka* begins by the time the water of the lake rose so that the fish can be harvested when the water ebbed. The kind of fish in the lake and can be cultivated are fresh water fish, like Nila fish *(Oreochomis niloticus*), Gurami fish (*Trichogastaer pestoralis*), Kandea fish (*Pantius goneonotus*), Gabus fish (*Channa Striata*), Betak/Oseng fish (*Anabas testudinens*), Golden fish (*Cyprinus carpio*), and many other kinds (Dinas Pengairan Wajo, 2006). The harvested fish from the Tempe Lake, besides for the local consumption is also delivered to the other areas.

Besides as ordinary fishermen and the fish cultivator, some of the head of the family in the floating house also do the economics' activity fish dealers. The raw fish from the fishermen will directly bought by the fish dealers in *Kalampang* (floating house) in Tempe Lake area. The raw fish bought from the fishermen are gathered to some amount then be delivered to Sengkang city to the second dealers. Some certain kind of fish will be

preserved and will be distributed to the other areas, and the rest are for the local consumption. Besides that, there are some fish dealers bought certain kind of raw fish just to be dried, and once a week, be sold to the other city. The economics' activities like this is a common view found in the floating community area in Tempe lake. As in the land areas, the floating dwellers economics' activities also varies with opening a small food stall located on the floating house. Besides providing many kinds of food stuff, the stalls also provide fuels for the transportation of the fishermen's boats in Tempe Lake. The existence of the small food stalls on the water really help the people who live on the floating house in fulfilling their daily needs. The distance of the weekly market is quite far from the floating house, and only be reached by boat transportation and follows by public transportation.

Besides that, the existence and the unique of the floating house in Tempe Lake is travel spot which interests and adds the income of the people in this area and nearby areas. The Bugis' traditional house that build on the boat is an catching eye to some foreign and domestic tourists to visit. According to the local citizen, the high visiting season are from July to August. The visitors are commonly come from Spain, France, Netherlands, Germany, Italy, Australia, England and many others. Usually the visitors come in group from 7 to 25 per group. There are also privates individual visitors between 1 or 2 persons. In holiday season (from March to June) the frequency of tourist's visit is 1-3 times a week. While on September to November, the frequency of tourist's visit is only 2 -3 times a week. However, in the rainy season from December to February this area is rarely be visited by the tourists due to the big water current and strong wind which often come to the lake area. Although there are no certain fixed price for one-visit to the floating house, however the income is fairly enough for supporting the fishermen's family for adding the extra income.

Women's Role in the Floating House

The role of the head of the family in the floating house is to catch fish in Tempe Lake from morning to night time. The fish then be selected from the fresh fish which directly be sold to the dealers, or be brought home for the dried. The role of the housewife in supporting the economics' family in the floating house is to help their husbands to add family's extra income. There are many kinds of side jobs done by the women on the water to solve the economics' crisis.

According to the interview with important people living on the water, many decades ago, before women were involved to role in the economics' family activities, the income of the fishermen is only enough for the need living on the water. Such as buying daily food, and fulfill their children's school needs on the land. However, since the women were actively involved

in adding their family's income, the social living of the fishermen is improving. Some fishermen has deposited their money to be used to renovate their floating house, even, can build a new house in the land. This shows that women's existence who live and doing business in the economics on the water need to be considered. Many kinds of economics' activities done by women living on the water are helping the production process and marketing the dried-fish, open some stalls, providing rent-a house for the visitors and become vendors on the water.

Figure 2. Drying Fish Process

4.2.1 The Production Process and Fish Distribution

For the production process from the raw fish to dried-fish is done by the women in the floating house, although sometimes some men were also help when the amount of the fish are plenty. The activity of cleaning the fish, preserving the fish and storing the fish which are died is done in the house. While the process of drying the fish is done the back of the house, which is the roofless open area on the boat. This is purposed so that the fish drying process will get the sun rays maximally. The production process are cleaning the fish, drying the fish, and helping selling the fish to the dealers or the nearest market on the land, For the distribution process, the fish which are catches and dries everyday , gathered in a week, waiting for the market day to come. After the fish are enough to be sold, the housewives and the neighbors carried the fish to the market in other city using boat transportation to the land and the travel will be continued by the rented public transportation which fetch and carry the housewives. The selling fish which is directly sold to the market have relatively higher price than to be sold to the dealers. The income earned by the housewives in a week are Rp. 200.000,- to Rp. 300.000.- This is certainly makes the housewives be able to save some of their money.

4.2.2 Stalls

Floating house besides be functioned for living and dwelling place, to some of the wives, be uses for opening stalls.The area of the stall usually is on the front side and be united with the guest's room or be located on the side of the front door or side door. Many kinds of family 's daily needs and fuels for boat transportation are sold in these simple stalls , but some sell fuels only, like gasoline and kerosene. People who want to shop the stuff in the stalls only use the boat only as the only one transportation on the water. When the husbands are going to catch the fish on the lake, the wives are busy with their chores to do the household activities, drying the fish, and regulating the stalls. The activity of opening the stalls is to make the ends meet, and some of the income is deposited for the unexpected happening such as their husbands are suddenly ill and can not go fishing.

4.2.3 Rented House

The unique of the architecture of the floating house on the water which is the combination of the concept of the Bugis' traditional house without poles with the use of boat on the lower structure, made this community becomes one of the tourists' destinations in Wajo Regency. The visitors who come from other countries will spend 30 minutes from the downtown using one-machine boat. The destination is to go to the floating house in Tempe Lake. To anticipate these visitor's visits, some wives rent their houses as rented house for a transit for resting place while enjoying the specific local food from Tempe Lake which are prepared by the housewives. By the end of their visit, the visitors usually pay some amount of money to the housewives through their accompanied guides. The total increasing visitors each year, made the income of the housewives also increase. Besides for the deposit money for the family's needs, capital money for trading, and also be used for the financial plan for the heath problem if some of the family's members are sick.

4.2.4 Vendors

Women's role in improving family's economics is also be done outdoor, such as become a vendor. The limitation axes to the market place made some of the housewives doing the trading activity as vendors going around the floating community. Each house will be visited in turns by the vendor to offer their stuff using boats. The trading stuff are primary and secondary needs of people's daily needs. The payment system is with the direct pay or can be done by weekly installment. By doing this trading system, women are able to support their husbands in earning family's incomes.

Figure 3.
Women Vendor

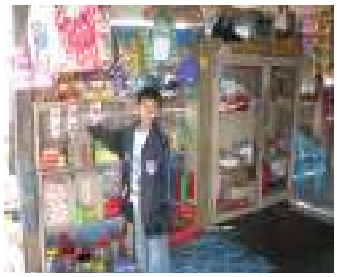

Figure 4.
Stalls in The Floating House

4.3 The Effect of Women's Role in Family's Economics in the Floating House

The role which is carried out by women in the floating house has given an economic refreshment in several recent years. The involvement of women in the direct marketing process to the producers and customers in the market has proven in improving family's incomes. Ever since before women took part in supporting their husbands distributing the fish to the market, the fish will be sold cheaply to the fish dealers on the lake. The price of the fish usually be determined by the dealers' own price since the fishermen were not aware with the recent market price. Consequently, whatever the total amount of the fish being catch, the income are not significantly to fulfill their daily needs.Since the housewives take role in helping their husbands to sell the fish directly to the markets, the price of the fish is relatively higher, so that the incomes from the selling of the fish will be more increased compared with the selling through the dealers on the lake. This can be seen by the fishermen's ability in renovating their floating periodically, the ability to build a better floating house for a better living, the ability to built the Bugis' house in the land, the ability to send their children get a better education, and for a saving. This refreshment is certainly be done because of women's role which are involved in many kinds of economics' activities on the water.

5. CONCLUSION

The involvement of women in improving family's economics productivities in the floating house, is a decision and awareness of potential developments from the result of adaptation for decades. Domestic roles which is so far stacked to countryside women , will be developed gradually become public's

role which is still limited and certainly still in the informal sectors. Nevertheless, this matter shows that the limitation of education and the skill of countryside women and the limitation of transportation on the water are not a hindrance factors in improving the self potentials and women's economics productivity. To resource the women's economics rights is like doing the direct selling in fishery sector which commonly done by men, opening stalls, renting the house, and become vendors has proven improving family's income. As the family's ability to renovate and build the house, paying the children's tuitions and for the saving. Ever since before women has taken role in family's economics' activities by using their economics' rights. The husbands' income is just enough for keeping the lives on the water.

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Housing Finance Scheme for the Poor using Islamic Microfinance System:
a Promising Approach to Enabling Strategy

Dyah W. Astuti

ABSTRACT

When revitalization program has been issued in the master plan, one challenge is how to do slum upgrading in urban area. The problem rises because most households in the area not only have no financial capacity, but also have no access to housing finance institution. As a consequence, they cannot improve their housing condition. In the last decades, the Indonesian government had tried to play the role of enabler to help lowest-income community in housing provision. Some programs, such as P2BPK and P2KP, were introduced and applied by developing revolving fund, first known as *'Kredit Triguna'*, that was especially designed to meet the need of housing financing scheme for the poor. But like many other schemes offered by the government, the scheme cannot sustain and stopped lending. It means another alternative scheme, applied integrated approaches from physical, economy and socio-cultural sides that help the poor to access key assets and to increase productivity, should be created. On the other hand, having the biggest Moslem population in the world, Islamic finance is an alternative to be developed in Indonesia. The system, that is considered to promote distribution of welfare based on equality and fairness, allows chance to reach the poorest. Based on the reason, this paper is aimed to develop the most sustainable alternative scheme, and Islamic Microfinance system is seen as the tool. The observation is mainly focused on comparison between *'Kredit Triguna'* as the sample of previous loan applied and the instruments used in Islamic Microfinance. Adopting the concept of '*Triguna*' into Islamic Microfinance hence can be one potential innovation to fill the gap between housing finance needs and low income community.

Keywords: enabling strategy, housing finance, Islamic Microfinance, slum upgrading

1. INTRODUCTION: IMPROVING THE POOR'S ACCESS TO HOUSING

1.1 Housing Financing, the Main Constraint

What actually the reason behind the growth of slum and squatter in urban area is interesting to be observed. *Panudju (1999)*, as well as *Sheng (2000)*, described that housing for low-income community is a complex problem and has some constraints, such as financial constraint, limitation of land availability and land price, limitation of housing and environment facilities and infrastructures, and the last, building material and building codes/regulations.

Furthermore, economic condition is believed to be one potential reason. It is generally believed that one of the distinguishing aspects of being poor is being without assets. The rapid rising price of housing has consequence that mostly households cannot reach even the lowest housing price *(Panudju,1999)*. However much costs are reduced, there will always be the need for finance to build or to upgrade dwellings *(Whitter, 1994)*.

Moreover, *Sheng (2000)* argued that the problem occurs because almost all households need a loan to gain home ownership, but the poor have no access to banks because of their irregular income and employment. The lack of collateral needed to get loans is another reason. Consequently, they cannot even improve their housing condition. According to *World Bank (1996)*, increasing access for the poor to two important inputs, credit and land, can break this cycle, as well as *Whitter (1994)* that proposed to increase the accessibility to finance by reducing the obstacles to lending.

On the other hand, the biggest challenge of mobilising finance for low-income housing is to identify the sources of finance. And so far, no financial institution can provide any loan for housing financing for the poor without any involvement of the government. Habitat (1991) argued that for sustainability reasons, the funds needed for financing housing must be generated locally from domestic resources. Therefore promoting savings for housing then can be agreed as one perfect way, even though increasing savings capacity for the poor is not easy and the establishment of savings for housing itself is still in debate because the high inflation rate in many developing countries can erode savings rapidly.

1.2 Microfinance as a Powerful Tool

In term of housing financing, there is no doubt that improved access to housing finance will lead to improved access to housing. When a loan for housing becomes unaffordable because of low-income, high prices and high cost of long term finance, microfinance, in which people can save and borrow money in very little amounts, becomes potential alternative since most people lack of income and assets to qualify for a loan.

According to *Ferguson*, *in Habitat, 2002:23-24,* the term microfinance for housing referred to small loans designed for low/moderate-income households, typically for self-help home improvement and expansion, but also for new construction of basic core units. In another paper published by *IIED (1999),* he also explained that the small loans are given at market rates of interest and amortized over short terms, often two to ten years.

But how access to housing can be improved through microfinance? Microfinance is seen as a powerful tool for reaching the poor, raising their living standards, creating jobs, boosting demand for other goods and services, contributing to economic growth and alleviating poverty. *(Dhumale and Sapcanin, 1998)* It can be translated that microfinance, besides it works directly to finance housing, it also gives chance to people to increase their affordability to access housing by productive loans. It relates to the trend that the most interesting development in recent years is the explosion of microfinance approach in all regions mainly in the field of credit for micro-enterprises.

2. WHY USING ISLAMIC MICROFINANCE SYSTEM

2.1 Basic Principles of Islamic Finance

Islamic finance has different characteristics to conventional financial system. As a system based on cooperation and equity, *Arifin (2000)* and *Hafidhuddin (2002)* agree that Islamic finance has two principles.

The first is avoiding ***al-iktinaz***, which means prohibition to idle money (unproductive activity), because there is flow concept of money. It relates to interest free system applied. Islamic finance creates interest-free system based on profit-sharing basis, as an alternative to conventional system. Fitting to Islamic aim to develop entrepreneurship, interest free concept leads capital owners improve investment and flow money. Consequently, at the end, it will impact to increase wealth distribution, social and economic justice.

The second is leading to ***al-ta'awun***, which means to help and to collaborate each other for the goodness in the community. The strongest point is in its expansion to the poor, and it is established in form of social funds as redistribution of welfare. It prohibits money circulation only in one part community, and on the other hand, at the same time, leads people to invest and promote money distribution, or economic with equity.

2.2 The Potencies of Islamic Finance in Microfinance Level

Based on the principles, Islamic finance, an interest-free system which promotes entrepreneurship, risk-sharing and care for the poor can offer

alternatives at the microfinance level, and can also play a vital role in the economic development by mobilizing dormant savings. *(Iqbal, 1997)* According to *Antonio (2001:134), s*ocial mission involved besides commercial goals also gives special characteristic that makes *sharia* banking different to conventional banking.

This system can be fully understood only in the context of Islamic attitudes towards ethics, wealth distribution, social and economic justice. Principles encouraging risk sharing, individual rights and duties, property rights, and the sanctity of contracts are all part of the Islamic code underlying banking system. *(Dhumale and Sapcanin, 1998)*

In this light, many elements of microfinance could be considered consistent with the broader goals of Islamic banking. Both system advocate entrepreneurship and risk sharing, and believe that the poor should take part in such activities.

Because Islamic finance deems to profit rather than interest, it offers funds based on intangibles, such as businessperson's experience and character. It means that viable projects rejected by conventional lending institutions because of insufficient collateral might prove to be acceptable to Islamic banks on profit-sharing basis. *(Dhumale and Sapcanin, 1998)*

According to *Abdouli (1991)*, there are three basic instruments of Islamic finance that could be built into the design of a successful microfinance program, ***mudharabah*** (trustee financing), ***musyarakah*** (equity participation), and ***murabahah*** (cost plus mark up). Other type of Islamic funding, ***al-qard al-hasanah*** (beneficence loan, the only loan permitted by ***sharia*** principles), which means an interest-free and zero profit loans advanced for humanitarian and welfare purposes, could also give chance for the poor access to microfinance. *(Al-Harran, 2002)*.

2.3 Islamic Social Welfare Funds as Potential Funding Sources Used in Microfinance

As explained before, there is social funds for helping the poor (*dhuafa*) in Islam. The main resources of social funds come from *zakat*, *infaq* and *shadaqah (PIRAC, 2002)*, which required to be paid by wealthy people to the poor. With minimum amount of 2,5% from their idle money, *zakat* is compulsory for Moslems that have ability to pay, while *infaq* and *shadaqah* is more likely a preference. *Zakat* is potential funding source to be developed, since the government of Indonesia will reduce income taxation to everybody who pays *zakat*.

The potency of *zakat* resource in Indonesia achieves amount of Rp. 7,5 trillion. This assumption is based on Central Bureau of Statistics that there are 40 million households in Indonesia, with 32 millions among them are

classified as welfare family, 90% of them are Moslems, with annual income Rp. 10 million – 1 billion / household and *zakat* tariff is 2,5%/annum. *(El Saha and Ishom, in PIRAC, 2002)* Another potency is that it is possible to use and to manage it as revolving fund to help the poor*. (Hafidhuddin, 2003)*

3. COMPARATIVE ANALYSIS

To assess the possibility of using Islamic Microfinance instruments for housing financing for the poor, the comparative study is used to observe similarities and differences of natures between the previous loan offered and Islamic Microfinance instruments.

The reasons for carrying out a comparative analysis in this research is to find the ideal conditions for housing financing schemes that can solve the problem of uncontrolled housing growth which leads to urban slum, based on the previous and the potential schemes.

The observation is mainly focused on comparison between *'Kredit Triguna'* as the sample of previous loan applied and the instruments used in Islamic Microfinance, that are *Al-Mudharabah*, *Al-Musharaka*, *Al-Murabahah* and *Al-Qard Al-Hasanah*. In this case, *'Kredit Triguna'* was a scheme, developed as mixed loan, that existed effectively for around 2 years. On the other hand, although Islamic Microfinance faces fast growing demand in Indonesia, it has no experiences in financing housing through microfinance in Indonesia as well as no specific program in mixed loan as used in *'Triguna'*.

Some parameters are selected based on the set up of an ideal condition that needs to be satisfied. However, there is no strict definition of an ideal condition for a loan scheme. Hence the selection process of the parameters chosen is quite difficult.

After quick reviewing the scheme models of microfinance or housing-finance used in some countries (Bangladesh, Yemen and India), the aspects of availability, acceptability, accessibility and sustainability seem to be included as a component in an ideal condition of housing-finance. The limitations and definitions of parameters used are:

- Availability
  refers to whether supply and demand are available and can meet the need each other
- Acceptability
  refers to whether the scheme is acceptable to most people in the target group
- Accessibility
  refers to whether the target group population can and is able to use the scheme

- Sustainability
  refers to whether the scheme can sustain both from supply and demand sides

Table 1. Comparison between the natures of *'Kredit Triguna'* and Islamic Microfinance

PARAMETERS	*INDICATORS*	KREDIT TRIGUNA	ISLAMIC MICROFINANCE			
			Al-Mudharabah	Al-Musharaka	Al-Murabahah	Al-Qard Al-Hasanah
AVAILABILITY	Market	- Urban low income with housing problem - Used to access land and housing, completed with income generating loan	- No specific income class - Investment fund	- No specific income class - Classical joint venture	- No specific income class - Consumptive and productive financing	- Only for *dhuafa*, low income communities - Consumptive and productive financing
	Source of funds	Government special funding program	Mainly cooperation and investment funds	Mainly cooperation and investment funds	Mainly cooperation and investment funds	Mainly Islamic social welfare funds
ACCEPTABILITY	Lending criteria	- Conventional - Complicated - Community based loan, not personally	- Contract based on *sharia* - Administrative requirements - Prospective	- Contract based on *sharia* - Administrative requirements - Prospective	- Contract based on *sharia* - Administrative requirements	- Contract based on *sharia* - Simple
	Lending terms	- Interest based, low rate, 8.5% pa - Medium to long term, 5-20 year	- Interest free based - Profit and risk sharing - Flexible terms, depends on contract	- Interest free based - Profit and loss sharing - Flexible terms, depends on contract	- Interest free based - Profit taking from price mark up - Flexible terms, depends on contract	- Interest free based - Zero profit oriented - Short term, < 1 year
ACCESSIBILITY	Location of supplier	Branch offices	No specific location	No specific location	No specific location	No specific location
	Quality of services	- No specific promotion but uses consultant as intermediary - Community based collateral / social guarantee	- No specific promotion - Alternative to collateral, such as business person's experience and character / intangible	- No specific promotion - Alternative to collateral, such as business person's experience and character / intangible	- No specific promotion - No collateral	- Promotion in public mass media - No collateral
SUSTAINABILITY	Performance	- Unsatisfied record of recovery rate - Ineffective application - Only used in 1996-1998 - Non-renewable funding source	- High risk - Monitoring is required	- High risk - Monitoring is required	- No specific record information	- Monitoring is possible - Usually be repeated with increased amount of loan - Renewable funding source
	Potency	- Good mixed loan - Increased repayment capacity program	- Promoting entrepreneurship - Profit and risk sharing	- Promoting entrepreneurship - Profit and loss sharing	- Collateral is not required - High flexibility	- The only soft and benevolent loan - No risk in case of default - No required collateral

4. THE POSSIBILITIES

4.1 Imitation of Two Important Aspects

Basically there are two concepts in the scheme, the concept of mixed loan and the involvement of community, which were the strong points and furthermore, should be handed and developed.

4.1.1 The concept of mixed loan

Theoretically, Triple Functions Loan was a perfect combination as a mixed loan addressed to urban poor, which combined between giving access to key assets, land and housing, and productive loan. The idea was how to make people could afford housing, and one solution was by increasing their income, so savings or repayment capacity will increase automatically.

According to *Whitter (1994),* one of the strategies in mobilizing resources for low-income housing is enhancing access to finance. But *'Triguna'* did more than only enhancing access to finance by financing housing. It also gave people chance to increase income by productive loan, given in the last step of financing. The advantage calculated from both sides, borrower and lender, was that the borrower could improve repayment capacity while the lender had more security, or guarantee, in the sustainability of loan repayment.

As the original name of *Triguna* implicates, it divided into three steps that relates to each other. Firstly to help people to get security of their land, usually it was used to solve illegal or squatter housing, and the first step was meant to help people to legalize land tenure. For the second and third steps, land that had already been legalized would be used as collateral to get more loans to construct housing and to generate income.

Each steps would be divided more accurately into more than one financing stages. It was dropped gradually, depended on the achievement of the project. The last step, amount of 15% of total loan, would be used as productive loan to guarantee the sustainability of repayment.

4.1.2 The assistance of Community Based Organizations

As a loan scheme given to community, and not personally, the involvement of the community, either in the decision making process or in the development process, was one key to success based on the theory that was applied by Triple Functions Loan. In *'Kredit Triguna'*, it could be seen in term of community participation, either by sweat equity or by hired worker. By participation in very basic level, it made possible to produce low-cost materials, and kept production cost down.

Moreover, this loan package was designed with the assistance of community based development program and introduced bottom-up approach in housing provision for urban poor. Based on this reason, it could be easier to understand why low-income community could accept this program. They felt that they were one of the decision makers for themselves, because no one knows better what their needs, priority and available resources. In the long run, it would lead people to have sense of belonging more than in top-down approach.

4.2 Improved Aspects of *'Kredit Triguna'* by Islamic Microfinance

There are different strengths and opportunities of both schemes that can be complement each other, in which the weaknesses and threats of *'Kredit Triguna'* can be covered by the strengths and opportunities of instruments in Islamic Microfinance. Based on the analysis, it shows the good possibility of

adopting process. At least there are three aspects that will improve automatically by adopting *'Kredit Triguna'* using Islamic Microfinance instruments.

4.2.1 The availability and sustainability of funding source

The problem of dependency on government special funding program, which usually comes from international loan, is that the source will be non-renewable and less sustainable. It strongly influences to the continuity of the program. Without any sufficient funding source available, it is very difficult to sustain in the long run. As a consequence, many schemes, including *'Triguna'*, that have resources from government special funding programs were discontinue.

The problem can be solved by the availability and possibility to use alternative funding source in Islamic Microfinance system, the Islamic social welfare funds. The strong point of Islamic social welfare funds is that it is paid every year based on social reasons, so it is seen as renewable and very secure funding source.

4.2.2 The refusal of interest based used in conventional system

The trend of Islamic movement revival in Indonesia has effect to the increasing Moslem awareness of Islamic financial concept in the last decade. The effect maybe is not perceivable yet, but it should be recognized as a serious threat in the future. The fact that most of Indonesian populations as the target group are Moslem who is unwilling to pay interest on savings and borrowings recently, means the conventional system used in *'Kredit Triguna'* could likely be unacceptable.

By using Islamic Microfinance, the method of Triple Functions Loan will automatically interest converted into three basic contracts, that are soft and zero profit loan, profit sharing, or sale and purchase schemes. Automatically it will reduce the resistance of Moslem that prohibits interest. With the support of many Islamic financial institutions that already established and still grows recently, it seems possible to develop new scheme based on *sharia* that is adopted from *'Triguna'* scheme.

4.2.3 The dependency on government involvement

Last aspect, as a system based on faith, *sharia* system is independent from government involvement. Government involvement is not something that should be avoided. But then, the problem rose because of the involvement of government that usually made the process became more complex. It has

affected people cannot access the loan easily. By the concept based on *sharia* that is used as norm in community as whole, the emphasis of social spirit to help each other in the goodness and the independency of government involvement can cut off the complicated bureaucracy system.

Another problem was the instability on government policies. There is no doubt that some policies made by Indonesian government, such as tax reduction policy for *zakah* payers, give opportunities to develop Islamic financial system. But even though there is no policy to support the *sharia* system, or the policy that support this system changes, it will still grow naturally. It can be concluded that from sustainability point of view, the independency of Islamic Microfinance can overcome the problem in the instability of government policies.

4.3 Avoid Repeating Two Important Failures

The basic failure of the scheme is that the performance was not satisfactory. Based on the BTN repayment record, *'Triguna'* had not shown good recovery rate. But why did it happen? The concept of mixed loan actually tried to encounter problem in financial capacity, by giving the third step of loan for productive activity, and finally aimed to secure repayment sustainability. But in fact, it seemed that the aim could not be achieved successfully. There are two reasons for it.

4.3.1 Mismanagement in side streaming risk

One reason is that most borrowers used big part or the entire productive loan not for income generating activities, but for other purposes such as for consumptive needs, called side streaming. The risk in side streaming was high, and no special effort done to minimize the risk. What the scheme did was collected solidarity fund besides the monthly loan repayment, as part of the collective responsibilities of the borrowers to shoulder the cost of defaulters. It was aimed to reduce the risk of default for lender only, but could not minimize the risk of side streaming itself.

The side streaming made the loan was not well targeted, as the aim should be. Consequently it had bad impact for the borrower's capacity to repay such loan, which finally affected to the sustainability of the loan program.

4.3.2 Ineffective and inefficient in application

Another reason is that the productive loan was given as the last step in *'Triguna'* scheme, while the borrowers should start repayment directly after

the first loan had been liquefied. So, there was no possibility to improve their financial capacity before the repayment period was started. As a consequence, most of them felt hard to repay such loan, and only part of them decided to continue to the third step of loan scheme because they were quite apprehensive could not afford to repay.

Based on the reason, the application of *'Triguna'* scheme showed inefficient and ineffective way to drive the income of the borrower. It would be more appropriate and sustainable if the scheme could give a chance for the borrower to improve financial capacity first.

5. BUILDING THE PERFORMANCE

5.1 Building the independency

The dependency of *'Kredit Triguna'* on government policies in the instability of politics situation had an impact on the availability of institutions involved and also the availability of funding sources. The objective of the strategy is to create a new scheme that can sustain without any dependency on the government role.

Proposed strategy

- Developing the independency of new scheme by using instruments in Islamic Microfinance that fit to Triple Functions loan concept, those are *Al-Murabahah* and *Al-Qard Al-Hasanah*.
- Maximizing the potency of Islamic social welfare funding sources, including *zakah*, *infaq* and *shodaqah* for revolving fund, in proper way based on *sharia*.

5.2 Savings while constructing

As analyzed before, the aim of giving the third loan for productive activities could not be achieved successfully. One of the reasons, the borrowers should start repayment directly after the first loan had been liquefied, without any possibility to improve their financial capacity before the repayment period had to be started. Based on the problem, the objective hence is to give people opportunities to improve their income and their financial capacity first, then followed by giving access to housing financing.

Proposed strategy

- Significantly changing of *'Triguna'* scheme, the productive loan in the proposed scheme is given as the first step of the scheme, uses *Al-Qard Al-Hasanah* contract, the zero profit loan given usually in short term (Figure 4.3). The loan can be quick repeated with increasing amount of loan after timely repayment.

- Introducing planned savings for housing, increases as targeted each year. By savings continually, besides it will give result the amount of money saved, also gives opportunity to show the increasing of financial capacity and savings capacity as the two most important things related to having access to financial institutions.
- After achieving certain amount of savings, i.e. 20% from the housing price, they can order housing with certain specification to Islamic financial institution, uses *Al-Istishna' Wal Murabahah* contract which means purchase by order. The price, calculated from total building cost with mark-up as the profit taken by the institution, the repayment method and the repayment period have to be declared from the beginning and signed by both sides.
- Then the institution, which normally has no stock of housing, will be responsible to provide the housing for them in accordance with the specification. It can be built by the institutions themselves, or by giving sub-contract to other institution.
- No repayment for housing before the construction process is finished, so the community has enough time to continue planned savings while the housing is still in progress.

5.3 Management of risks

Another reason why the aim of giving the third loan for productive activities could not be achieved successfully was that the loan available was used for other purposes by the borrowers. Monitoring and supervising, even they are possible to be done, but very difficult in application. So, the objective is to set risks management of the new scheme developed from the beginning in order to lower risk for the lender, by maximizing the role of community (CBO's) in control function and managing fund in a proper way.

Proposed strategy

- Taking funds for productive loan aimed to help poor people to improve their financial capacity from the very secure and renewable source, that is Islamic social welfare funding source. As a loan given based on social reason, besides no profit taking allowed, it supposes to have no punishment in case of default. With social welfare funding source, there is no risk for the lender institutions, usually *Baitul Maal*, because they collect and receive the funds from alms-giver as a gift and not a loan.
- Tightening monitoring and supervising process by compelling the role of CBO's in controlling their members, from selection process, loan approval and repayment control.
- As the concept of *'Triguna'*, each steps will be divided more accurately into more than one financing stages. It will be dropped

gradually, depends on the achievement of the project to make monitoring and supervising more possible and easier.

6. CONCLUSION

After comparing the nature of *'Kredit Triguna'* and Islamic Microfinance based on the four parameters, availability, acceptability, accessibility and sustainability, there are many similarities and significance differences between the two schemes. With the advanced study done based on strengths, weaknesses, opportunities and threats, it can be concluded that the similarities and the differences between two schemes gives benefit by complementing one another. Moreover, it gives possibility to combine them.

Basically, there are three main strategies, building the independency, savings while constructing and management of risks. The strategies are then developed into a new scheme as an alternative.

In the new scheme, the concept of mixed loan is imitated with a rotation. The new scheme is divided also into three stages. Those stages are income generation as the first stage, access to land as the second stage, and the last, the third stage is dwelling constructions. As in *'Kredit Triguna'*, each step in the alternative scheme is divided more accurately into more than one financing stages.

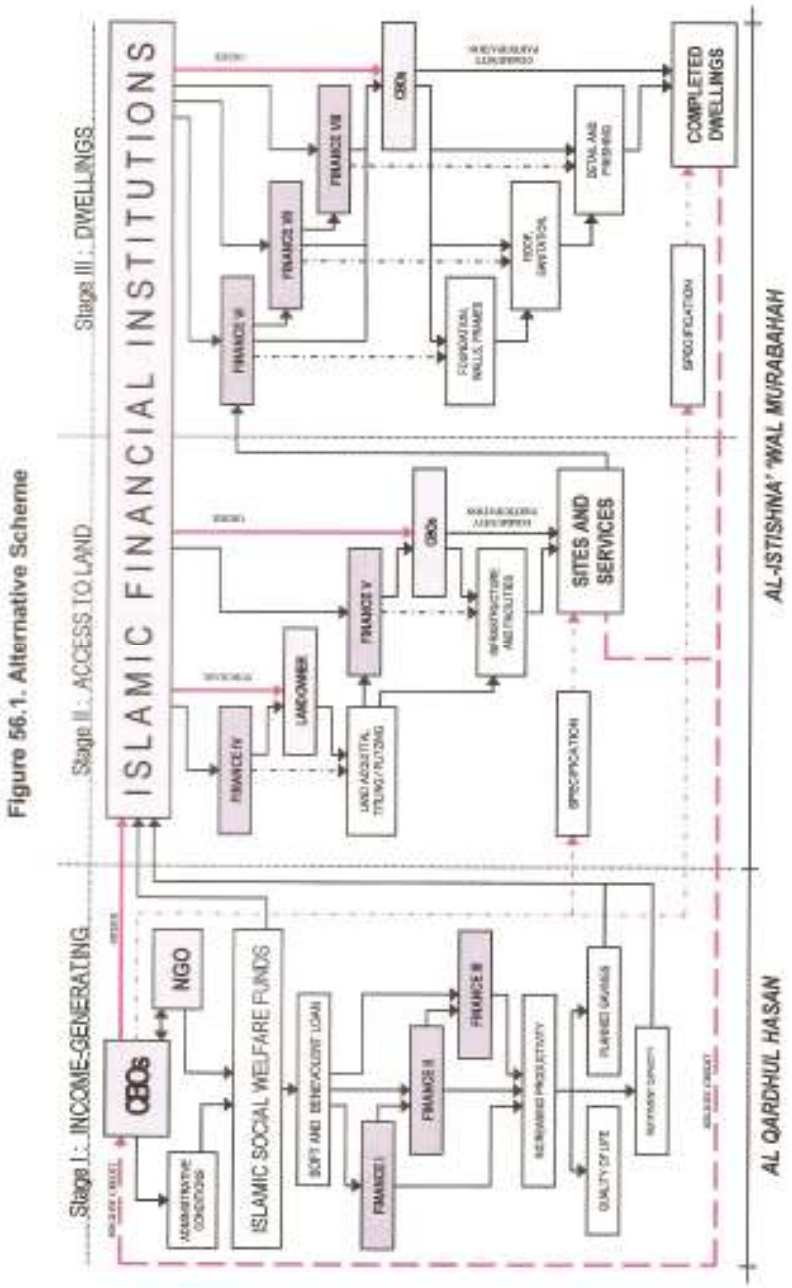

Figure 56.1. Alternative Scheme

In the first step, income generation process is started from the establishing of CBO. With the assistance of NGO, the CBO sets up the organization and prepares to access Islamic social welfare funds for their members. The fund is then given in form of soft and benevolent loan, that is *Al-Qard Al-Hasanah*.

The loan is given in three financing stages, in which there is a possibility for a quick disbursement with increasing amount of loan after timely repayment in each level. It is aimed to increase productivity, which hopefully will lead to income generation. Part of the income generation is purposed for increasing quality of life of the poor that usually is very bad, starting planned savings for housing, and repaying the *Al-Qard Al-Hasanah* loan.

After achieving certain amount of savings, the members of CBO order to financial institution to provide land and housing. That is the beginning of the second step, access to land. As an implementation of managing risk by reducing housing cost mentioned in the strategy, the institution then orders to the CBO itself to provide land and housing for the institution, with the *Al-Istishna' 'wal-Murabahah* parallel contract. Financing in accessing the land is divided into two stages. The first financing is purposed for land acquittal and titling, while the second financing is mainly for providing infrastructures and facilities in the area.

In the third step, that is dwelling construction, the CBO is still responsible to construct housing for the financial institution. Financing in this step is divided into three stages. The first financing is for constructing foundation, walls and frames. The second financing is for completing roof, sanitation, doors and floors. And the last financing is for detail finishing.

After finishing, the completed dwellings do not automatically belong to the CBO's members, but to the institution that is financing the land and the construction process. Based on the *Al-Istishna' 'wal-Murabahah* parallel contract, the institution then sells the dwellings to the members of CBO in the specific terms, those are amount of profit taken and repayment period, agreed from both side before. The dwellings and the land where the dwellings are built still belong to the institution until they are paid off.

That is basically the operation of the new alternative scheme proposed, based on the analysis on supply and the formulation of the tools and the strategies. The new scheme is promising more sustainable scheme to be applied, by flexibility and simplify access to loan, providing no collateral and interest free loan, continuous availability of non-subsidy, renewable and secure funding source, and logically shorten repayment period.

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COORDINATOR PAPER

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Residential Dynamics: the Co-existence of Formal and Informal Systems in Sudan and South Africa

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ABSTRACT

This paper looks at the residential dynamics in Khartoum, Sudan and typical patterns in South African cities and concludes that formal and informal systems co-exist and are mutually supportive in both contexts, though perhaps with different spatial manifestations. It is believed that any approach that does not acknowledge the presence of the 'informal' as a force that cannot be eradicated and as a legitimate power, energy and form of expression is doomed to fail.

The thoughts portrayed in the paper are the initial concepts for a new research project at the Department of Architecture, University of Pretoria.

Keywords: housing, informality, Khartoum, South Africa, urban environment

1. INTRODUCTION

While South Africa has had success in the rapid delivery of houses, it is acknowledged that there are still many challenges faced in terms of generating functioning neighbourhoods as opposed to housing-units. South Africa's approach to informality is also dominated by the idea of eradicating informality – with a deadline set for the attainment of that goal by 2014. Contradicting messages are nonetheless being conveyed by government in that the National Department of Housing is also in the process of implementing new policy through a series of business plans one of them dealing with upgrading informal settlements.

It is generally assumed that formal and informal processes are strictly separated spatially. In Khartoum, Sudan the boundaries are less distinct. However, political unrest over many years has led to the sprawl of the city with informal areas now surrounding the city and changing the social dynamics in the peripheries.

2. APPROACH TO INFORMALITY

When urbanized poor people need homes they either acquire them through land invasions or they wait for government provided housing. Alternative solutions involve capacity building, saving schemes and job provision in a holistic approach which needs collaboration between diverse government agencies and more participation by various stakeholders. This would generate a complexity that needs alternative systems of governance.

Formalizing housing and markets does not necessarily guarantee poverty alleviation and neglects the skills and knowledge that the poor may contribute to development. The reality is that informality appears to be faster and more efficient when it comes to providing for the needs of the poor. Formal mechanisms of housing delivery are too slow and unaffordable. Professional architects and housing practitioners need to position themselves in terms of various interpretations of development—this is critical in order to guarantee their effectiveness.

Because there is no security of tenure, people in informal settlements are reluctant to invest substantially to convert an informal dwelling into something more permanent. This often results in people living in structurally compromised buildings for years. This volatile nature of squatter settlements inhibits long-term development, thus professional interventions are essential.

While recognising some of the negative impacts of slums on cities and their inhabitants, for example the health and safety problems they may create, a pro-removal approach to slums neglects the fact that every informal structure, whatever its form, is in reality a home. Squatter settlements are not

undifferentiated areas of squalor but dynamic environments with unique characteristics that need to be properly researched before any intervention is made. Slum upgrades are complex processes requiring the combined efforts of a number of disciplines.

While the relationship between the state, market and community is complex – how that relationship is conceived and managed is incredibly important to the progress of housing policy and practice. This relationship is crucial to the success of initiatives in housing and determines the degree of participation and accessibility to housing. The building of networks should be socially inclusive and adopt a long term business plan rather than rely on short term project funding (Hamdi 2004: 108). The role of government should allow for innovation when the boundaries between public and private or formal and informal are blurred. This needs strong governance structures.

Huchzermeyer (2006: 21) summarizes state-society relations as being:

- oppositional (hostile, repressive or exploitative)
- indifferent (neglecting, tolerating or ignoring)
- cooperative (co-opting or integrating)

Hamdi envisions a re-imagined role for a state that regulates without interference (2004: 108). Cross (in Huchzermeyer and Karam 2006: 261) defines 'communal governance' as an informal, grassroots-based system built on face-to-face relationships and individual patronage. It is facilitated by a rural principal that land and building rights are allocated within the community, by the community, using social criteria in an adaptable and accessible basis. It competes directly with formal systems and is essentially an anti-bureaucratic system. She further explains how these forms of governance kick in and become active to replace failed formal systems – failure which at times would trigger violence and protest.

Hamdi (2004: 25) views this dynamic, an important resource for the poor, as being positive: "When agents like these, operating as they do, individually and informally coalesce and through their network act as a larger and single organization, when they are able to wield power and influence and become sophisticated, they emerge and become developmental." The same author states: "We have begun to invent novel forms or civic engagement where government cooperates with, rather than serves, its citizens moving from provider to enabler, much as it has learnt to do with the market. New forms of mutual engagement are emerging everywhere; based on participation and social entrepreneurship which is finding its way into the body politic of governance. Turnbull calls this 'Network Governance'; an inside out structure of social organizations and enterprises held together by well-connected and well-networked systems rather than command and control hierarchies or [the power elite]…" (ibid: 107).

He further explains how Turnbull debates the question "Who governs the

city?" and how elusive the answer may be. The relationship between the state, market and communities has been viewed simplistically in the past; however communities are not a cohesive and integrated unit but are fragmented. A simplistic interpretation of markets and housing activity views two worlds that co-exist separately from each other when in reality the formal and informal feed into each other and overlap.

People living in informal settlement may be employed in the formal sector – while people living in formal dwellings may be very active in the informal sector. Physically, many types of informal dwellings are built on formal plots and as extensions and additions to formal structures.

Jenkins (in Huchzermeyer and Karam 2006: 87) elaborates on the nature of informality to include the physical ("land and house construction/redevelopment"), the social ("household structures") and the economic ("informal access to resources"). Formal or informal activity may be a representation of survival strategies where poor households have multiple livelihood strategies (Smit in Huchzermeyer and Karam 2006: 104). Smit further explains that this diversity and complexity in livelihood strategies is reflected as family structures, built form and a determinant of decision making regarding day to day activity, including housing options.

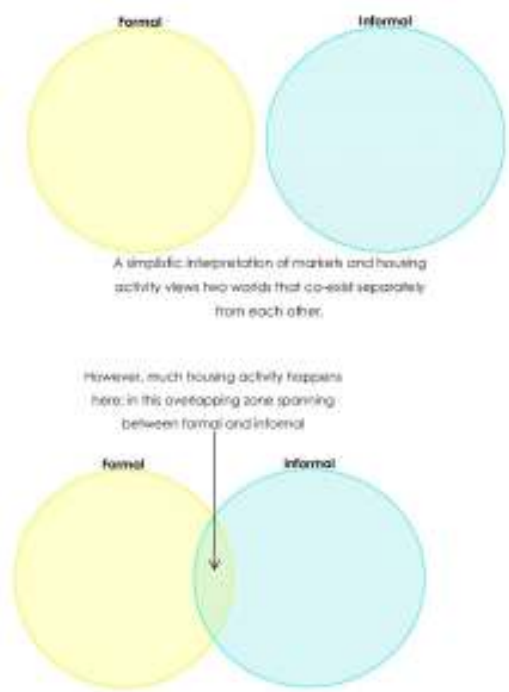

Diagram 1. Housing Activity Happening at the Interface Between Formality and Informality

Trying to control and regulate these processes is a futile attempt. Even developed contexts have a degree of informal processes and activity; in some cases policy and practice is trying to accommodate for that rather attempting to stamp it out. Jenkins (in Huchzermeyer and Karam 2006: 85) argues that the concept of informality itself is "…rooted in an approach that is state dominated." He views informal settlements (or informal responses and activity in general) as "…a socially legitimate response to real needs" representing some positive characteristics.

Development and participation, despite good intentions, are being conceived in the minds of the few, defying the very meaning of the terms. The solutions actually lie "out there" – and that is where research needs to be operating.

3. INFORMALITY AND THE ROLE OF DESIGNERS OF THE BUILT ENVIRONMENT

Royston questions whether bridging the formal and informal is possible or even desirable, as he explains, while acknowledging that the poor are disadvantaged by informality, that formal systems may not work for the poor (Royston in Huchzermeyer and Karam 2006: 167).

Patterns of emergent systems in cities are indicators of real need and the imposition of pre-determined plans should be avoided as professionals become more sensitive to context. Hamdi (2004) explains how 'small' interventions grow and guide development and how the role of the professional becomes one of creating conditions for emergence and in this respect searching for catalysts. These catalysts then generate a process of 'negotiated reactions' (Dewar & Uitenbogaardt, 1991), whereby continuous transformation is achieved within a stable environment. The built environment is not static: it is a complex relationship between stability and transformation (Habraken, 1998).

In squatter settlements transformations happen at an enormous rate compared to formal (more static) designed environments. Furthermore, the relationship between structural supports and detachable units is unclear. There is a degree of permanency in a squatter settlement—such as the layout of the site, but the overall set up is experienced as short term. Any design intervention will need to support a process in which speed of construction, changeability, affordability and transportability are important characteristics. Transformations will not only apply to structural elements but also to location and function.

Hamdi (2004: xviii) expresses the difficulty to determine the level of intervention to be implemented; he states that too much formal structure may inhibit personal freedom, limit progress, destroy the system it was built to

serve, and only serve itself. He also explains how small initiatives which may "…lack a global perspective…" but are however important as their "…collective actions become 'a natural part of the effort at social reconstruction' and an effective way of managing cities."[1]

Harber (2006) explains how a squatter settlement develops in a process that is the exact opposite of a formal settlement: the land is occupied, buildings put up and services finally installed. He believes this usually generates an environment that is layered, develops gradually and is less disruptive to the existing site. This gradual, organic process is perceived as a common characteristic of successful urban places and is a quality found in vernacular settings.

A heightened sensitivity to various forces of urbanisation needs to be developed among practitioners and policy makers in order to strike a balance between stability and transformation: multiple levels of the environment where multiple agents may intervene in transforming their areas of control through complex decision-making, modification, adaptation and appropriation. This will contribute towards the generation of a layered and complex environment which fosters a sense of belonging, ownership and pride. This is direct opposition to conventional approaches to decision-making in the built environment which is a top-down process, strictly planned and rigid. This strict planning results in monotonous, fragmented, mono-functional environments and disempowers people (professionals and communities alike).

Within urban structures, the house is seen as a flexible/adaptable product rather than a fixed final product. Urban design as an inseparable component of housing acknowledges the various levels of the environment differing in the degree of permanence and changeability thus allowing for more involvement and affordability. This challenges our understanding of informal economies, settlements and structures and our role as professionals in interacting with these alternative systems and "ways of doing/living".

4. SOUTH AFRICAN CITIES

Current development and housing policy claims to be "pro-poor" and with a focus on "in-situ" up-grading of informal settlements. While a world-renowned housing programme is in full swing in South Africa, the housing backlog is not decreasing. Informality, emergence and the so-called "2nd economy" are aspects of the South African social/economic scene that will probably remain for many years to come.

Current debates regarding development, in general, and housing, in particular, attempt to position the issues in the broader perspective of the 'south', the African continent and new policy directions in South Africa. This would mean that an approach to informality needs to be appropriate to context

and cannot follow the attitude of the developed world to informal systems where there is a high degree of government regulation.

The table below shows a hypothetical housing ladder in South Africa where informal processes exist, not only at the bottom rungs, but also higher up on the ladder. The assumption of many officials and professionals is that these rungs need to be eradicated and people in those categories integrated into the upper rungs of the ladder. Informality in all the other forms of housing has not been sufficiently studied.

[1] Rodney Harber: personal communication.

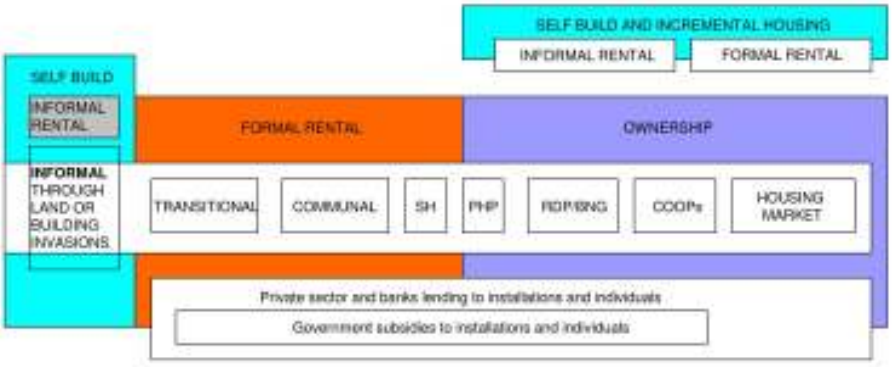

Diagram 2 A Hypothetical Housing Ladder in South Africa Showing Informality As Being on the Lower Rungs of the Ladder

5. KHARTOUM, SUDAN

The table below shows a portrayal of the various types of housing and housing processes in Khartoum, Sudan. In the last two decades Khartoum City has expanded considerably. With recent oil wealth becoming apparent, real-estate is booming with exorbitant prices. Due to the congestion of the older neighborhoods of Khartoum, wealthier people are seeking refuge outside of the old city boundaries, competing with informal settlements, many of them inhabited by internally displaced people due to the political problems in other parts of the country.

Like South African cities, informality is very evident even in formal neighborhoods with one dynamic being very unique to Khartoum: the many Sudanese working abroad send money to incrementally build homes in the capital city resulting in many building sites with buildings at various stages of completion being inhabited by guards and builders. This creates an interesting dynamic with people from different social classes living next to each other for many years.

New dynamics also result from the influx of foreigners into the country after opportunities opening up with the oil industry. These, as well as tribalism issues among internally displaced people from areas of political conflicts, that now inhabit the peripheries are all opportunities for further research that have not been thoroughly investigated. There are also problems with social stigma arising from an inherited system of classifying residential areas as first, second, third or forth class. However one interesting comparison with South Africa is that in the latter improvements in financial status usually imply that people move from one area of the city to another while in Khartoum improvements happen on the same site irrespective of the classified class system. This happens informally in many cases and has led to shifting dynamics in many Khartoum neighborhoods.

Diagram 3 Portrayal of the Housing Eco-System in Khartoum, Sudan with Informal Systems Existing Across All Levels[8]

		Description/examples of residential area	**Building materials + descriptions**	**Additional notes**	**Research opportunities**
1	First Class	Site and service government schemes for certain professional categories. Private sector built, self funded (Sariya). Illegal on agricultural land (Fardos) – referred to as luxurious informality Al 'Ashwaii al Fakhir.	Predominantly reinforced concrete frames with infill brick panels. This defines the aesthetic of many neighbourhoods in Khartoum.	1st-3rd class funded through Al Bank Al 'Agari or other banks; conditions minimum 3000 salary, guarantees as land. Gated communities as a new phenomenon.	Social dynamics created by incomplete homes.[2] To what extent is there interaction between the permanent residents and the temporary residents (guards and builders) of first class areas?
2	Second Class	Site and service schemes (1960-2000). Sometimes employer-assisted (Ayoob Al Ansari as an example), government built sakan shaabi.[3]	Reinforced concrete and brick construction. Sakan shaabi: semi-detached house 1 room+ kitchen+ Bathroom/ toilet), 200-300m² repaid over a long period of time.	Site and service schemes have stopped since 2000. This has led to difficult access to land.	Reselling making land unaffordable. Current densifying is unplanned thus leading to problems of services not being upgraded accordingly. Sprawl is creating displacement of poorer segments of societies. Different classes having to co-exist causing social tension.

3	Third Class	Site and service schemes. Site only, services added through community initiative and funding. Government funded Sakan Igtisadi or Economic Housing.	Reinforced concrete or load bearing brick construction.	Current government supported programme: extra room added to existing house to the value of 10, 000.	Social stigma associated with areas classified as third class. Home improvements: mix of income levels in the same area. Multi-storey buildings impacting on the use of open spaces.
Traditional	Traditional occupation of land later upgraded	Salha (Omdurman), Faki Hashim, Allzbaa (Bahri), Laoota, Soba El Hila (Khartoum)	Load bearing structures, reinforced structures, 3-D panels		Community initiated processes such as the establishment of informal suqs: Laoota as an example. Servicing systems for upgrading.
Informal	Initially informal occupation later upgraded and legalised,	Mayo	Mud blocks strengthened by straw or manure. Plastered by zibala[4] for water proofing.[5] Damuriya[6] as ceilings	Rent-a-bed (usually to immigrants from other African countries).	Social dynamics between locals and foreigners. Installation of services. Alternative infrastructure.
Informal	Illegal occupation and building: not upgraded	Mandela, Angola	Unstable construction of tree branches, cardboard,[7] metal sheets and fabrics.		Community dynamics. Tribalism issues.

6. CONCLUSIONS

This theoretical background and these comparisons are the initiation of an academic exploration[9] being embarked on by the Housing and Urban Environments (H-UE), Department of Architecture, University of Pretoria which acknowledges informality as a legitimate energy within cities. It is believed that for designers of the built environment to be able to intervene in the development of cities in any meaningful way, they must arrive at solutions through the understanding of the unique everyday realities of a specific context – thus avoiding blanket solutions and by acknowledging the many agents acting on an environment at any given time.

It is believed that enterprises emerging from informal settlements are more suitable for low-income groups and that support of the informal sector better addresses the urgent need for poverty eradication. We are challenged as professionals to investigate beauty and efficiency in informality as an antithesis to a middle-class interpretation of how life should be lived.

[2] Builders and guards creating different levels of income within the same area, informality in areas classified as first class. Lijaanshabiya issues certificate of residence to the guards to enable them to access schools and facilities. [3] Peoples' Housing

[4] Zibala is a mix of manure, adobe and straw.

[5] These materials vary between areas; sometimes wire mesh is used on the external surfaces, then plastered, internal plastering sandwith gum Arabic, [6] Damuriya is rough handwoven cotton traditional to the northern areas of the Sudan.

[7] Referred to as "carton", thus the name attributed to some of these areas.

[8] This table is not all inclusive and is merely based on a brain storming exercise and impressions of a group of lecturers from SudanUniversity, December 2008. It will have to be revised with available statistics and other studies done on housing and urbanism inKhartoum. [9] www.h-ue.co.za

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COORDINATOR PAPER 2

Technological Transference of Sustainable Housing Construction in Urban Informal Settlements

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ABSTRACT

The technological transferring that is presented at this paper is part of an education model implemented by the association "Housing Communitarian School" in Barquisimeto Venezuela, through which the university is involved in the local development and whose purpose is the one of qualifying the spontaneous manufacturers in the handling of techniques adapted in the construction of sustainable housings. The school also assists the requirements settled down in the Constitution Bolivariana of Venezuela as for the student obligatory social service, through community internships as part of the ordinary plan of study. So far they have been possible to qualify 250 students and more than 150 residents; 3 investigation projects and more than 4000 hours of technical support. The importance of the work resides in the achieved impact through the prototype of teaching communities, which is a contribution that can be replied in other universities of the region.

Keywords: capital stock, education, sustainable housing, technological transfer.

1. INTRODUCTION

Most poor settlements residents live in inadequate houses, exposed to great risks, with deficiency in Basic services and a high stack level. Auto-construction and auto-management are the main production way of building houses for people without technical training. On the other hand, in spite of poverty conditions they live in, these residents are responsible for the biggest housing stock produced in some cities in Latin America. In Venezuela, until 1998, 77% of houses were produced by the informal sector in spontaneous construction processes. (Tipple G., 1998).

The construction of this type of house is made without appropriate resources or technical assistance, and in most cases on unstable surface with high risks before natural disasters. (Arrieta and Bujana, 2004). One of the most important aspects of this issue is he risk that the informal settlements face because of the poor quality in its construction and the present threats which give the informal settlements a high vulnerability condition which has produced thousands of human lost caused by natural disasters or by men. There are a lot of spontaneous constructions built using “Engineering with no Engineers” in Venezuelan Settlements, specially in Caracas where they are placed in topographically inadequate land, considering the seismic high risk condition in the Capital as it is in Barquisimeto classified as Zone V “high risk” which represents an eminent danger for hundreds of thousands residents who are the most affected ones during tragedies. To identify the most common failures in these constructions and knowing what causes them is an important part of the research work previously to the proposal.

This reality of housing is been ignored, almost completely by the engineering schools not only in Venezuela but in most Latin American countries. However, in spite of the eminent needs, residents of informal settlements require from universities. It’s possible to see with some exceptions, a break out between research nature and objectives, the teaching, the extension of Venezuelan universities and the needs present in local communities in technological and social assistance.

In the case of UCLA University, out of 190 research projects and 120 extension projects, only a few are socially oriented to overcome local poverty levels, besides, the social impact of the projects with an incidence to change in reality, could be considered as “localized” and without great consequences, because these are done in an isolated way and in some cases with no continuity, therefore not optimizing the resources.

The work promoted by the Housing Communitarian School Association leads to the proper technological transference in building houses, allowing the practice of social Engineering and the promotion of Architects and Engineers with a social conscious. Also, it’ been possible to build alliances between public and private sector enterprises oriented to solve social problems lead by poverty and acting in the housing building processes in local settlements.

From this experience, we have had the participation of students and spontaneous constructors in the construction of “housing seeds” built as part of the training in the building in a practical way, using this training as a base for the promotion of economical and social communitarian development. So far, it’s been possible to trained over 350 people; three (3) research projects and over four thousand (4000) hours of technical assistance.

2. BACKGROUND

The Housing Communitarian School Association was founded in the year 2000 ascribed to UCLA Engineering School. Its purpose is to form spontaneous constructors in “barrios”, helping workers who have hared the traditional constructive practices to get appropriate formation and introducing Architectural and Engineering students as communitarian internship.

This association identifies and applies research project results with social pertinence related to traditional sustainable construction techniques that leads to internal processes and cover the appropriate techniques to local needs. In our 4 years founded, we have given technical assistance and introduced innovation construction processes produced in local settlements, involving not only technical aspects but everything related to citizen development, always looking after reducing housing vulnerability built without technical formation and on unstable soil, also taking care of increasing life quality of the residents of the area.

The educational model is been designed based on a number of courses and instructors selected according to local needs. This model is founded in 2 programs: a) University internship training Program and b) Communitarian constructors training program. Each course has a work base team which introduces professors from different deans according to the different activities for each case. In the course’s programmes, we include life formation and human development.

The participants are motivated through practical exercises and communitarian experience references. Themes such as project for life, pro-activity, assertive behaviour, etc are part of training. As an important experience background with global focus, where one solves the housing issues, one can name “ciudades de la gente” from Venezuelan Central University Architecture Faculty, Zulia University Local Development Unit Architecture Faculty and UCLA Engineering School Sustainable Habitat Group.

The key strategy is been to introduce professors from different disciplines, students and residents in training programs in order to teach them the appropriate technical construction techniques in sustainable housing building, using these houses as strategy to produce income generation, involving the universities in the social community development.

All these lead to the elaboration of this Project, founded in qualitative research and action research, using as a base the experience lived during the foundation of Housing Communitarian School Association in the year 2000-2004 to achieve a technological transference proposal in sustainable housing construction in informal settlements of Lara State, Venezuela, sustained in the continuous improvement towards the quality of life which also allows to be transfer to other universities in the region.

3. URBAN SETTLEMENTS CHARACTERIZATION

The detailed urban settlement characterization in Latin America was presented in CONPAT 2003 in Yucatan, Mexico in the Project "Vulnerability, Risks and Threats in Latin American and Caribbean Urban Settlements. Sustainable Livelihoods" where it was possible to analyze the socio-economical characteristics, the risk degree and the vulnerability, the basic services and the pathological problems in housing construction in these urban settlements. In the following two years, attempting to the actual UCLA institutional politics, we have continued the research, making important founds that allows a better comprehension of the habitability issues, the life quality levels and the high risk conditions in what the residents of our cities live. In this opportunity, we present in the tables 3, 4, and Graphic 2, information from the research project "Public Risk in Urban Settlements. Case: Barrio Simon Bolivar" (Bujanda J.), referred to the magnitude of poverty in 17 countries of the region, global numbers of the basic services existence and data of the poverty levels in Venezuelan urban settlements, specially Lara State, which is been applied to the technological transference proposal contained in this project. Additionally, we also present in Table 1 and Graphic 1, numbers of the Human Development Standards and the density of the principal settlements in Venezuela.

As it is reflected in the following Table, Honduras and Nicaragua present the higher poverty and indigence percentages. Honduras with a 74% of poverty which almost 51% are indigents and Nicaragua presents 65% of poverty and 40% in indigence condition. In Latin America, in general the poverty percentage is about 35%, with a urban poverty condition of almost 30% with 14% of national indigence and 9% in urban zones. In the late 90's, 125, 8 million residents in urban areas are poor, compromising this situation to 35 out of 100 homes.

Table 1. Latin America (17 countries): Poverty and Indigence Magnitude. 1997-1999

Country	Year	Poverty percentage of homes (a)			Indigence percentage of homes		
		Total country	Urban Zones			Urban Zones	
			Total	Metropolitan Area	Total country	Total	Metropolitan Area
Argentina	1999	--------	-------	16.2	-------	-----	3.5
Bolivia	1999	54.7	42.3	39.1	32.6	16.4	14.5
Brazil (b)	1999	29.9	24.6	----------	9.6	7.1	---------
Chile (c)	1998	17.8	17.0	12.4	4.7	4.3	3.0
Colombia (d)	1999	48.7	44.6	38.1	23.2	18.7	17.2
Costa Rica	1999	18.2	15.7	14.7	7.5	5.4	4.7
Ecuador	1999	-----	58.0	---------	------	27.2	---------
El Salvador	1999	43.5	34.0	26.4	18.3	11.1	6.8
Guatemala	1998	53.5	38.8	30.9	28.0	12.9	6.6
Honduras	1999	74.3	65.6	58.4	50.6	37.1	28.7
Mexico	1998	38.0	31.1	-------	13.2	6.9	--------
Nicaragua	1998	65.1	59.3	52.4	40.1	30.7	24.0
Panama	1999	24.2	20.8	19.6	8.3	6.6	6.3
Paraguay	1999	51.7	41.4	32.9	26.0	13.9	6.9
Dominican Rep.	1997	32.4	31.6	------	18.2	11.0	-------
Uruguay	1999	-------	5.6	5.8	------	0.9	0.9
Venezuela (f)	1999	44.0	-----	-----	-------	19.4	----------
Latin America (g)	1999	35.3	29.8	-------	13.9	9.1	---------

Source: CEPAL,

(a) Includes indigence or extreme poverty conditions

(b) Average data in Rio de Janeiro and Sao Paulo.

(c) Own estimations based on national socio-economical characterization polls (CASEN) 1990, 1994. 1996 and1998. .

(d) From 1993, one opened the geographical range to evaluate almost the total of urban population.

(f) From 1997, the poll design does not allow the separation of urban-rural component. However, the numbers correspond to the national total.

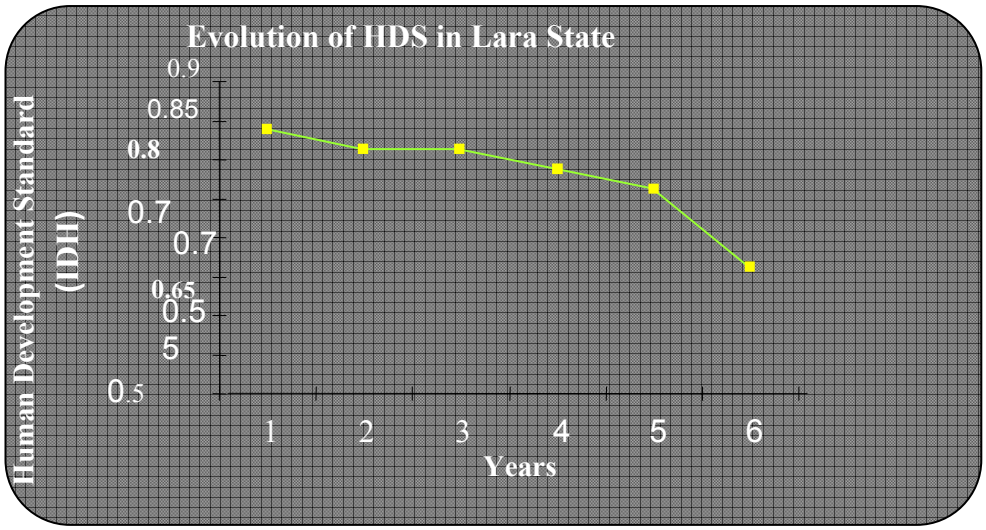
(g) Estimations for 19 países.

4. HUMAN DEVELOPMENT STANDARD (HDS)

The human development Standard in Venezuela for 1997 was 0.69, considering as half low, and Lara State was estimated in 0.66 (half low) under

the national average. If we see Graphic 1, we recognize how the HDS has descended in the last decade in the State.

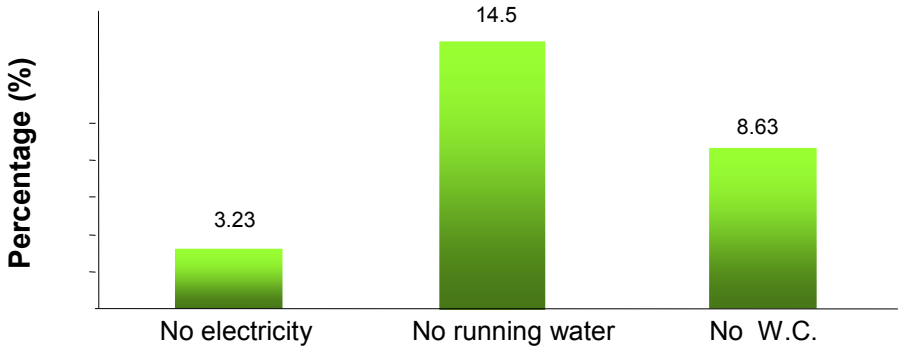
For 1991, this standard was in the upper range (0.85-0.825) since this range had been modified to (0.825-0.8) even when it's still considered as high. The standard continues going down to reach 0.66 in 1997 just as we stated before (INE, 2000).



Graphic 1. Evolution of HDS in Lara State.
Source: (INE). 2003

One of the principal needs in cities of Latin American countries and the Caribbean area is the access to basic services such as running water, electricity, served water systems, etc. This situation is even worst in informal settlements since the land is located where local governments do not have the planning of supply for these services, therefore, they are excluded from the possible planning in short medium or long terms from the local governments.

According to numbers published in the year 2000 by the UNCH, in the year 1997, 18, 63% of urban population in Latin America and the Caribbean area do not have access to running water systems, 13, 70% do not have drinkable water, 24, 95% do not have W.C. (bathrooms) in their houses, 33, 15% do not have access to served water systems and 21, 58% do not have electricity services. According to Statistic National Institute (INE) (2003), in Venezuela the numbers and percentages are lower than the ones in the rest of Latin America and the Caribbean area. 14, 5 % do not have running water systems. In Lara State, 17, 84% (3, 54% above national average) do not have running water systems and 25, 31% do not have access to served water systems.



Graphic 2. Basic Services in Venezuela
Source: National Statistics Institute. (INE). 2003.

Risk and Vulnerability: risk is considered dangerous within the informal settlements but its level and perception degree and ways to actually face them can vary according to the leadings that the society chooses. The principal threats the settlements are exposed to are identified in Bujanda's project and presented in Table 2.

In Latin America and the Caribbean, disasters have often occurred in the past 30 years. Almost every country is suffered a disaster at least in one occasion with great intensity and bad consequences to its development. Its geographical extension and its variety in climate and geology leads to manifestation in energy liberated by nature (Bujanda and Arrieta 2004).

Table 2. Principal Threats

PRINCIPAL THREATS

Climate	*Hydrology*	*Topography*	*Seismic*	*Produced by men*
1.Tropical twisters	1.Flooding	1. Avalanches	1. Earthquakes	1. War
2. Hail	2. Dryness	2. Sliding	2. Failures	2. Constructive failures
3. Tornados	3. Desertification	3. Subsidence	3. Liquefaction	3. Explosions
4. Hurricane	4. Sedimentation		4. Tsunami	4. Fire disasters
5. Cold waves			5. Volcanic eruptions	5. Collisions
6. warm waves				6. Pollution
7. Fire disasters				7. Diseases
				8. Subversive actions

Table 3. Principal Disasters occurred in Latin America and the Caribbean since 1972 (BID / CEPAL, 2000)

COUNTRY (ES))	DATE	EVENT	DEATHS	DAMAGES (US$10^6)
Nicaragua	1972	Earthquake	6,000	2,968
Honduras	1974	Hurricane Fiji	7,000	1,331
Guatemala	1976	Earthquake	23,000	2,147
Dominican Republic	1979	Cyclones David y Frederic	2,000	1,869
Bolivia, Ecuador and Peru	1982-83	El Niño	n.d.	5,651
Mexico	1985	Earthquake	8,000	6,216
Colombia	1985	Show-Storm del Ruiz, Armero, Chinchina	22,000	465
El Salvador	1986	Earthquake	1,200	1,352
Ecuador	1987	Earthquake	1,000	1,438
Costa Rica and Nicaragua	1988	Hurricane Joan	300	1,700
Costa Rica and Panama	1991	Earthquake	73	Over 2,300
Nicaragua	1992	Tsunami	116	30
Andes Community	1997-98	El Niño	600	7,694
Central America	1998	Hurricane Match	9,124	6,008
Dominican Republic	1998	Hurricane Georges	235	2,193
Colombia	1999	Earthquake	1,185	1,580
Venezuela	1999	Flooding	20.000-50.000	3,237

SOURCE: BID/CEPAL, 2000.

In all these disasters, the most affected ones are residents in the informal settlements since they don't practice the adequate standards in design, construction of the buildings and productive activities which do not reach to level of sustainable and define themselves with a high risk level. According to Bujanda, they have counted over 100 million deaths caused by these threats. To all this, we add the risk and vulnerability in the housing building process in informal settlements. This situation can be solved if we teach how to make sustainable construction.

Construction Systems used in settlements: In the project by Arrieta, Isea and Montilla 1994, it is identified that the most common construction systems are confined masonry. Based on this reality, we chose it to carry on with the research and as a base in the training process in the Housing Communitarian School Association. See Figure 3 "Construction of productive Seed-House using portant wall techniques. Rehabilitation Centre El Pampero. El Rosario. Lara State" and Figure 4 "Constructive Detail in corner of Seed-House". There is also a big difference in the housing construction spontaneous

process: the first one, which is the construction of the "rancho" as a provisional place, highly unstable and a second one which is the progressive substitution of the "rancho" for another house using more resistant materials. These materials which are frequently a second hand materials have low resistance and not very durable such as: zinc, wood, brick, carton, bahareque. Progressively, in some cases, their residents reach a higher number and start adding another floor originating multifamily homes which in some settlements in Caracas have reached up to 8 floors. The problem is not the number of floors or number of residents but the almost total absence of technical criteria in the construction process that produces a very vulnerable structural system before the natural disasters risks. This process is completed without any support of tools or necessary equipment. (Acosta, D. 2000). The typology in failures within this type of system is presented in Table 4.

Table 4. Construction Pathology. Some construction failures in housing construction.

Structural System	-Irregularity in foundations dimensions. -Variations in Columns and Beams dimensions. -Beam cross with no support. -Beams supported directly on walls. -Absence of transversal reinforcement. -Unlined Construction axes.
Materials: Concrete	-Resistance average between 80 and 180 kg/cm^2 -High content of organic material. -Dehydrated cement. -Variation in components quantity. -Porosity and irregularity in material surface.

5. OBJECTIVES OF THE RESEARCH

5.1 Main Objective

Create a communitarian teaching prototype founded on informal education through the Housing Communitarian School Association who responds in an integral way the needs of sustainable, habitability and durability through communitarian participation in construction, housing design, respecting the typology and settlement patterns to contribute maintaining cultural features, social capital and development.

5.2 Specific Objective

- Design and apply a student and resident training program in the use of appropriate techniques, resources production and housing construction as a strategy to increase social capital in settlements.
- Identify and create appropriate conditions to promote different work processes and human development in lowest social levels.
- Increase university borders involving the UCLA Engineering School to achieve the productive housing development in settlements in the State.
- Design a Technological Transference Proposal in sustainable housing construction in Lara State's settlements.

5.3 Methodology

Nature of research: to do the proposal, we used qualitative research which is based in a group of logical principles established and shouldn't be brought from the outside; the researcher, Eisner (1998) considers it not only a way to describe but most importantly, a way to improve Education Practice.
The objective nature and methods accuracy will orient the researcher reflection to approach and figure out the phenomenon that are socially studied. This is because in qualitative research, interactivity is an essential dimension of knowledge production process and it's an important constitutive part of human phenomenon studies.

This principle oriented to the meaning of observation process and communication in a methodological level in the present research. Among the qualitative research methods, one used action research which is the "systematically gathered information to produce social change" (Taylor and Bogoan, 1999), to solve practical problems (p. 32) according to Colina and other (1987). This type of research allows making projects that are related to values, aptitudes, behaviours and aspirations within poor class, in order to transform community human units into productive beings to improve their life quality. Among its forces, one find problem solving, the improvement of action sectors, the cooperative labour, the mutual agreement, the feedback in a cyclical process, and real environment impact. P.6).

This method is the best one when the researcher not only wants to know a certain reality or a scientific group issue but also solve it. In this case, the subjects involved participate as co-researchers in every phase of process: problem statement and evaluation of what is been reached.

The main purpose of these researchers is not an outside goal; it is oriented to create conscience and development in studied groups (Martinez, 2002). About housing, the used methodology is founded in communitarian housing construction projects based on productive beings and in this case with interdisciplinary team support and great resources from university.

Research scenery, Time and Action Units: the research scenery was the informal settlements in Barquisimeto city. The observation time was during 2000-2004. The action units were 18 professors from UCLA Civil Engineering Faculty and Business Faculty, 250 trained students for informal education, 150 trained residents, 3 researchers involved the Science and Technology National Found, The UCLA Scientific Humanistic and Technology Development Council, the Appropriate Technology Transference for poor Areas Institute, the Rehabilitation Centre of "El Pampero", "El Oasis", the Regional Housing Institute (IMVI), the Regional Housing Foundation (FUNREVI), the National Housing Council (CONAVI), the Faith and Joy Association and Torres County Jurisdiction, 25 local settlements such as: Aleman, El Rosario, La Lucha, Cerro Pelon, Simon Bolivar, 12 de Octubre, Los Arrengues, 19 de Abril, El Coreano 1 y 2, Los Pocitos, Agua Azul and El Pampero among others.

Recollection, Ordering and Information Analysis: the research project was made through 2 phases:

1. A Theory Research, introducing national experiences and other Latin American Universities experiences. Among the Venezuelan experiences, one can find Venezuelan Central University Architecture Faculty through Settlement Production Centre and UCLA Civil Engineering Faculty on the reaches in the brick field manufacture system (Sustainable Livelihoods Group) and Masonry System which are been a relevant academy support.
2. A field research made since the founding of Housing Communitarian School Association using participative observation methods in settlements studied and field notes to record characteristics as instruments. In order to follow learning, we developed and applied several different evaluation instruments such as: questioners, tests, design and making of "in situ" housing communitarian projects.

To analyze the information and order it, we made is simultaneously through the several systematic processes that found the action research (Lopez de George, 1997): a) Diagnosis of reality according to nature and objectives in each selected community, b) Change Strategy Planning, c) Planning Strategy Coordination, d) Strategy Implementation, training courses for project integrants, the residents, communication between work teams and as a way to transmit results, achievements and produced knowledge, e) Impact Evaluation, f) New Proposal towards high quality training courses.

An action research plan was made founded in 5 phases:

Phase I : the identification of quality in Income Production Processes, Quality Evaluation of brick-field units or concrete brick units manufactured in the region in a manufacture level. a) Action: background, bibliographical references producer identification, characterization, essay standards. b) Reflection: recommendation body for producers.

Phase II : pathology characterization and identification in use of spontaneous housing construction selected techniques. a) Action: construction fault identification. b) Reflection: diagnosis and evaluation, recommendations for spontaneous constructors in use of confined masonry.

Phase III : creation of a communitarian teaching prototype founded on informal education through Housing Communitarian School Association. Instructional design for technological transference courses- teaching objectives- learning- program contents- field practices- evaluation- schedule- resources. b) Reflection: trainer training.

Phase IV : documentation record, workshop. Involve community identification, financial sources. a) Action: technological transference with traditional methods. b) Reflection: instructive forms, resources, field practices, evaluation, schedule.

Phase V : final evaluation. a) Action: system receptivity, work impact. b) Reflection: “popular construction manual”.

Phase VI : improvement proposal. a) Action: technological transference founded on information technologies. b) Reflection: communitarian learning founded on informal education sustained in competition development.

6. FINAL CONSIDERATIONS AND FOUNDS

As result of each one of the referred phases, we obtained different products which were used as a base for the course instructional design, considering the advantages and disadvantages in every applied technique. For the adobe wall technique, we used stabled clay with cement; to do this, we used the experiences obtained for years by the Sustainable Livelihood Group from the UCLA Civil Engineering School. In a second course, we used the technique implanted by the Technology Transference for the Development of the Poor areas, Peru (ITACAB) which uses bamboo, carrizo or caña as bonding element in the adobe walls. Both experiences were analyzed comparatively, identifying the following founds:

Comparing the techniques of Adobe Portant Walls

Model Cost: 1.329.680, 00 Bs. 692,542 US$ (El Pampero)

Model Cost: 1.010.000, 00 Bs. 526,042 US$ (The Oasis, does not include roof)

	Adobe portant wall structure reinforced with steel (El Oasis)	**Adobe portant wall structure reinforced with carrizo (El Pampero)**
Seismic-Resistent Behaviour	Best	Not proved
Durability	There is infiltration for capillarity which leads to decrease Durability.	There is a better behaviour before water. There were not infiltrations. This contributes to durability
Sustainability	The materials are easy to obtain and are inexpensive compared to other constructive systems. It allows the residents get involved in the construction process which makes it reapplied. It allows the construction of housing according to budget availability.	
	The use of cement to make adobe units and steel Reinforcement increase the cost of the construction.	It is more sustainable because we use carrizo Reinforcement and don't use cement to make adobe units decreasing construction cost.
Versatility	The construction process is simple, easy to learn and inexpensive. Accepts multiple choices in the use of many different materials such as cement, caña brava, carrizo, bambu, steel and mod.	
	In this technique, it is used less amount of adobe units. The walls are thinner which is more versatile since the construction period is shorter.	The wall is wider which leads to using a bigger amount of adobe units for the construction.

	Adobe portant wall structure reinforced with steel (El Oasis)	**Adobe portant wall structure reinforced with carrizo (El Pampero)**
Dimensions of structure	3 m x 6 m (0.20 m wall width)	3 m x 5.5 m (0.40 m wall width)
Dimensions of adobe	0.40m x 0.20m x 0.10m	adobe: 0.40m x 0.15m x 0.15m ¾ adobe: 0.30m x 0.15m x 0.15m transversal setting: 0.35m x 0.15m x 0.15m
Types of foundation	Cimentación corrida y Sobreseimiento formado por bloques U rellenos	Cimentación corrida y sobreseimientos (0.45x0.30) de concreto ciclópeo
Reinforcement Characteristics	Vertical reinforcement: corner: 4 Ø 3/8" Horizontal reinforcement: 1 Ø 3/8" every 6 adobe rows	Vertical Reinforcement: Corner: 1 carrizo bar and in mid sections every 40 cm. Horizontal Reinforcement: Carrizos every 4 adobe rows.
Adobe Resistance and Compresion	25 Kg/cm² (has to be more since we used small quantities of cement which helps to get a better resistance)	Not proved (not cement used, which leads to a minor resistance)

Figure 1. Course: Construction of Model seed Productive Housing, using Adobe Portant Wall Technique. El Pampero Rehabilitation Centre. El Rosario. Lara State, Venezuela, May 2004.

Figure 2. Constructive detail in corner of model seed housing. (May 2004).

Another important aspect to highlight is the structure of the teaching prototype within the Housing Communitarian School Association whose philosophy sustains the teaching action proposal, through which we don't only transfer the technical information but ti also provides from a great human development experience and the growth of the social capital in the State, which leads to confident values, partnership, civic conscious and ethic that make the collective actions and cooperation easier and also allow to raise life quality levels in residents (Klisberg, B. 2004). The objectives and proposed goals are been achieved in a 70%.

The conception of a group work towards the social and communitarian development allow the promotion of social conscious in professionals to face the problems caused by poverty, acting in a direct way in pro the developing country. The founds presented are products from the lived experience in the

period. Those products are presented in Tables 5 and 6. The course profiles promoted by the Housing Communitarian School Association are presented in Table 9.

Table 5. Proposed and Reach Goals.

	Concept
250	Trained students
120	Trained residents
4000	Hours of Technical Assistance
02	Constructions of Seed Model (3 x 5 meters)
07	Published Pedagogical Notebooks
06	Inter-institutional Agreement signed

Table 6. Research projects made applying different processes towards the decreasing of physical vulnerability before the natural disasters and improving the life quality in local settlements:

	Concept
03	Research Project: 1) Most common failures in informal housing in settlement Simon Bolivar Arrieta de B. L, Isea A. y Montilla A. UCLA. 2000. 2) Elaboration of measurement instrument for the Housing Communitarian School Association. Anzola E. UCLA 2002 3) Public Risk in urban settlements. Case: Barrio Simón Bolívar, Barquisimeto Venezuela". (2004)

The project has also generated other Research Projects besides from the pointed ones before, whose results were used to funding and structure this Technological Transference Proposal in the construction of sustainable houses in different settlements in Lara State, also hoping that this proposal was applied in other universities as a strategy of building a social capital and local development.

Table 7. Other Researches

No	Research
1	Napier, M. Santosa, H. and Arrieta de B. L. "Understanding the Interface between the Environment and Sustainable Livelihoods in Informal Settlements in Asia, Latin America and Africa: A Review of Current Thinking and Practice" published in CIB report ISBN 90-6363-035-2 2003.
2	L. de Bustillos, J. Bujanda "Vulnerability, Threats and Hazard in the Caribbean and Latin America. Arrieta de Bustillos, J. Bujanda. Surabaya University. Published in memories of CONPAT 2003, Merida, Mexico and Surabaya Conference
3	L. de Bustillos. Housing Construction Pathology in Informal Settlements. Technical Assistance for Income Generating Through Consortia Communities. Published in memories from CIB Symposium "Construction and Environment", Sao Paulo, Brazil, November 2000 and CONPAT 2001 Dominica Republic, October 2001

4	Change of paradigm in low cost housing construction. How to assure the construction quality in different processes managed by Communitarian Organizations. Published in Memories from the V CONPAT and VI Quality Control. Puerto Alegre, Brazil, 1997.
5	Urban Clinics. Technical Assistance Services with Students and Teachers in Barrios of Barquisimeto Proposal. UCLA-DIC, Barquisimeto, Venezuela, 1996.
6	Social Engineering Practice. Presentation for Class '96. Barquisimeto, Venezuela, 1996.

The structural problems in the houses aren't usually in the one floor house, especially if it's a light roof house. The difficulties begin when these houses start growing and the residents build a second or third floor and the people actually believe that they can have more floors. The major problems are caused because they do not have a project or the technical advice to build structures. The problem will certainly show when a natural disaster occurs such as an earthquake.

Table 8. Orienting principles of the proposed teaching prototype

Technical Cooperation and Technological Transference: the relationship of autonomy and complementation, not dependency among students, professionals, technicians and sector residents.
Learning doing: the training program for communitarian contractors in the Housing Communitarian School Association is founded on the principle of "learning doing". The Theory-practical activities allow participants execute the techniques learned into the communities, learning the adequate method from practicing.
Community Participation: the Housing Communitarian School Association believes that the process of social development and construction, the practice of perfect democracy is required in critical participation of citizens in social life. Community participation is part of the project from the beginning and must participate and activity programs, area definition that required technical assistance, selection of formation and training themes as much as the following and evaluation of the process.
Binding -Training- Job: looking for a local sustainable development means to get involved with the economy and the income generation to the families in informal settlements where they work. In construction field, assistance and partnerships within small family enterprises that are willing to become in Micro-enterprises as product of communitarian productive training, increases the productive system with higher possibilities for trained individuals to get a job as a result of Housing Communitarian School Association training. The Housing Communitarian School gives priority to those settlements where there are development projects or social-urban rehabilitation projects from private or public institutions. We give them support to local workers in housing construction, services and other communitarian work in order to keep the benefits in the community residents. These contractors in small scale could pay the government investments to make the more efficient (Tipple, 1998).
Territoriality: the training and technical assistance activities to be developed by the students will adjust to the needs of each community, using for that only the participation of residents.

Teaching - Research - Extension: the Housing Communitarian School Association is an integral project that promotes teaching-research-extension activities. Participation of teachers, students and internships in the association represents the prototype of what an integral school project should have.
Articulations Intra and Inter-institutional: in order to add efforts, experiences and volunteers, it is important to coordinate and articulate with technical organizations such as educational institutions and social-urban development promotion in the region. In this issue, we have established certain agreements with National Housing Council (CONAVI), Faith and Joy Association, UCLA University and institutions such as National Science and Technology Foundation (FONACIT), among others.

Participants Profile:

- Residents: must know how to read, write, at east 18 years of age, live in the area, work or have worked in anything related to community, be willing to attend a communitarian work.
- Internship students: be a regular student in the Architectural or Civil Engineering Faculty with at least 140 approved credits. Be willing to attend a communitarian work.

Each course level (general formation, community and specialized training) is taught in separated courses. The flexibility of teaching programs allows it. On the other hand, the programme of different workshops can adequate to the demands of the courses, always acting coordinated to a proposed objective.

Table 9. Workshop choices

Micro-enterprise Construction Organization.
Human Development
Organizational and Communitarian Development
Informal Settlements
Construction Technology applied to Informal Housing
Social management
Most Common Pathologies in Informal Housing Construction
Construction Technology
Masonry
Cover, windows, doors
Electrical and Sanitarian Services
Waterproof work
Structural Blacksmith's Trade
Brick Manufacture
Brick-field Manufacture
Evaluation and Prevention of Natural Risks
Urban Disaster Management

The instructional design is conceived under a flexible and dynamic schema according to the established curriculum model and based on a

workshop offering that work continuously following the requirements for each course. The courses are organized and designed according to the demands in each internship program and the community needs with rehabilitation programs.

The workshops contain themes such as general formation and technical formation. The theory and practical workshops prepared by the specialists are the following:

The technical content of the program is covered with field practical sessions that allow the active preparation. Besides, the communities get benefits with the construction of a "seed unit" which is part of constructive practices workshops. This unit is later available to generate community growing processes and jobs.

The students are trained as technical assistants through 18 practical workshops. At the end of the courses, they are placed in Housing Institutions as "Communitarian Internship students" or and in Construction Processes, Settlement Rehabilitation and Housing for Social Interests.

The Communitarian Constructor Program takes place through design of theory-practical training sets, mainly in settlements where there are projects for urban development.

The Technological Transference Proposal in sustainable housing construction in different settlements is sustained in the use of information technology and the competence development. This should be based on the principles exposed in Table 8.

Universities should assume the commitment to adopt technological transference models such as this one, in order to project the settlements in their classrooms, showing the social pertinence through associations such as the Housing Communitarian School Association.

In a certain way, we have accomplished to gather the people together in order to increase their capability and make easier the achievement of goals with a communitarian objective. In a new way, UCLA University promotes values that increase Lara's social capital.

7. DISCUSION

This experience has included an innovation since involves students from UCLA University and Venezuelan Central University in order to study the reality of settlements and also train them in the appropriate use of used techniques in spontaneous constructions.

The contribution of this work resides in the use of the knowledge we have gained and the impact it can generate if is applied, using it as a strategy to generate activation processes in social economy and local development and as reference to introduce instructional designs to be applied in

information transference generated in different CONPAT events, whose memories represent an important support resource to improve the quality of our constructions not anly in the settlements but in the rest of the cities.

Additionally, this research and school participation is almost unexplored: the guilds and construction institutions and engineering faculties generally work with formal construction; civil engineers are trained for that, which does not include a number of spontaneous constructors that if we analyze the scale of participation, makes the reality absurd. The fact that actually an association such as Housing Communitarian School Association exists and promotes this type of processes causes local impact.

8. RECOMMENDATION

To unlearn the old culture using to the new learning, the sustainable housing construction in settlements in Lara State, where we could all “learn to learn” and “solve the problems” according to the local needs.

To transform the curricula from de Civil Engineer career in the different Faculties from the universities across the country founded on the competences development, introducing instructional design that allow the connexion between students, research teachers, etc to get involved in the solution of housing problem with objectives clearly defined with continuity and permanent towards quality.

To incorporate the Engineering and Architecture studies plans objectives oriented to promoting confident values, partnership, social conscious and ethic as a base for the local and social capital improvement.

To use the technical transference proposal in the sustainable housing construction in settlements in Lara State as an example to follow in other regions in order to contribute with the housing problem in the country and in Latin America.

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COORDINATOR PAPER

The Needs of Proper Control, Maintenance and Repair to Minimize Deterioration of Low Income Flats

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ABSTRACT

Slum settlements, which were illegally built, created unhealthy conditions in the city. The settlements were lack of infrastructure, built on unsafe land and houses were in poor quality. For these reasons the local government of Surabaya built rental flats for low income people and to house people from the slum settlements.

The aims of the study were to investigate improvements of the people's living conditions in the flat and the control, maintenance and repair of the building. The study covered first built flat in Dupak, built in 1988; flat in Sombo, built in 1990; flat in Penjaringan Sari, built in 2003 and flat in Urip Sumohardjo built in 2006. The method used in the study was explorative survey using questionnaires and interviewing the flat's dwellers.

The study indicated that the inhabitants accepted the flats for their new dwelling. However, after more then 5 years the flats deteriorated and needed repairs. The control, maintenance and repair of the flats were inadequate.

Keywords : Control, deterioration, low income flats, maintenance and repair

1. INTRODUCTION

The flats under study were all rental flats, built by the local government of Surabaya. Since the aim of the government in building rental flats is to provide adequate shelter for the poor, the study of how the improvements of the people's living conditions in the flats is important. This is to understand whether the rental flats can achieve the aim of providing adequate shelter as dictates by the Agenda 21 [1] and at the same time upgraded the slum settlements.

After more than 2 years of occupation, usually the flats need repair. How the control maintenance and repair of the flats are important to keep the building healthy and function as adequate shelter for the dwellers.

The flats at Dupak (figure1), built in 1988 was to house the poorest slum dwellers at the northern area of Surabaya. The flat is closed to the industry and harbour areas. The people lived in the slum settlements were circular migrants who work in the informal sectors or at the harbour. They were living in the slum settlements at Dupak about 20 years before moving to the rental flat. The rental flat unit-room is 3 x 6 m² and each level consists of 10 unit-rooms. There are six unit-flats and each flat consists of 40 unit rooms.

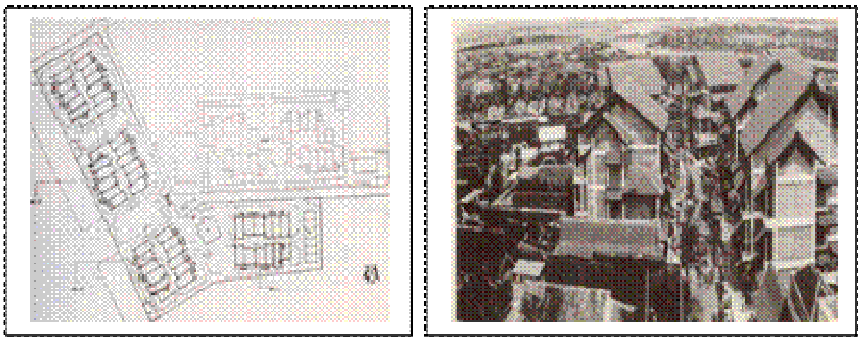

Figure 1 . Plan and Photograph of Dupak Flat
Source : Silas(1990)

The flat at Sombo (figure2) was built in 1990 to upgrade the slum settlements of the area, which covered 2 ha of land with about 3000 populations. The people lived in the area for about 30 years before the flat was built. Houses were very poor; 20 % were from 1.25 m² to 4 m² and were always inundated during rainy seasons [2]. To upgrade the poor houses four storeys 10 unit-flats were built with each level consists of 16 unit-rooms. Total rooms available are 614 which can house 3056 persons [3].

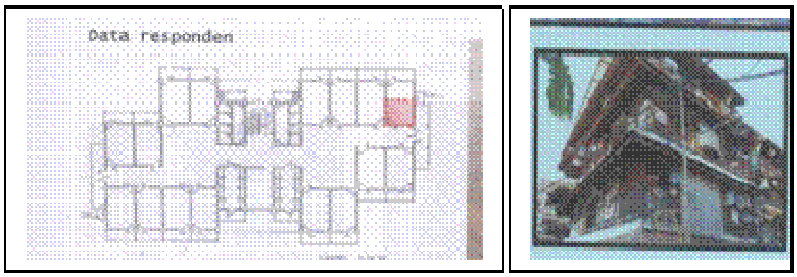

Figure 2. Plan and Photograph of Sombo Flat
Source : Irawan, T.et al (2007)

In Penjaringar built to provide shelter for people v he river banks and other slum are: 5 then all unit- flats were complete on each level; hence in one unit-fl

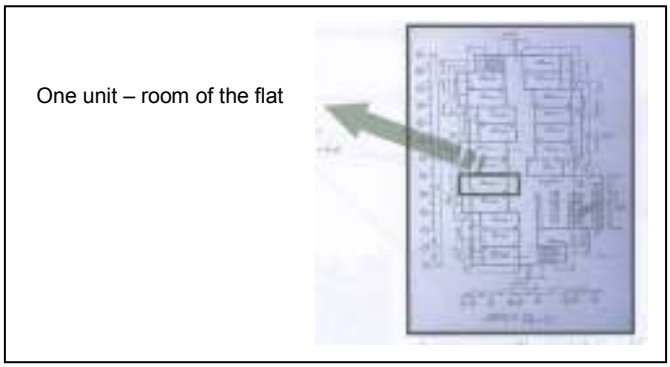

Figure 3. Plan of Penjaringan Sari Flat
Source : Setyawardani (2007)

The inner city flat is Urip Sumohardjo flat. This flat was first built in 1982 to upgrade the slum settlements in the heart of the city. There were many small shops stood in front of the slum houses. When the shops were on fire in 1982 all the 83 slum houses were also burned [5]. After 20 years the old flat was unsuitable for habitation and had to be demolished. With the redevelopment programme a new flat was built in 2005 to replace the old one (figure 4). As the other low income flats, the flat's unit-room is 3x6 m², with additional 2x3 m² for kitchen and bathroom.

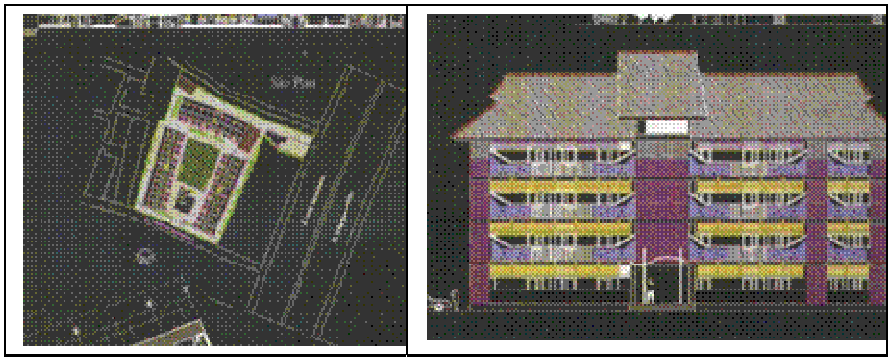

Figure 4. Plan and Elevation of Urip Sumoharjo Flat
Source : Laboratory of Housing and Human Settlement ITS (2007)

The Habitat Agenda 21 is followed to evaluate the adequacy and health of the rental flats, i.e." adequate shelter for all" : decent housing and secure access to land, infrastructure and services [1].

Based on socio-cultural conditions of the inhabitants, the design approach of the flats followed the standards [6] :

1. Follow the regulation and standard provided by the government.
2. Based on the people social activities and daily lives, there should be private and communal places.
3. Follow the standard of one toilet and bathing room for two households. One prayer room on each level and there should be a place for children to play.
4. The architectural design follow the local patterns, provides shelter, adequate sun and wind, and each household should has its own terrace, so that the dweller can create mini garden.
5. One flat consists of about 25 households or room units.
6. Building materials and construction should be durable, easy to maintain and cheap.

The above criteria were used to evaluate the physical conditions of the flats and the living conditions of the people.

Evaluation of proper control, maintenance and repair to minimize deterioration of the flats are based on the local government Surabaya regulation number 3, year 2005 about flats [7].

1. The flat dwellers have to ensure the formation of legal "dwellers association"
2. The dwellers association must be agreed by the mayor.
3. The dwellers association is responsible for the management of common property of the dwellers, such as common goods and areas.

4. The dwellers association may form a “management body” for the organization of management, includes control of common goods and areas, maintenance and repair.
5. The management body must be equipped with organizational units, personal and tools, which are important for the flat’s management.
6. The management body must be professional and legal.

2. LIVING CONDITION IMPROVEMENT FROM SLUM SETTLEMENTS TO LOW INCOME FLAT

Improvements of the people’s living conditions in the flats are presented here.

2.1 Living Conditions at Dupak Flat

The slum settlement at Dupak was occupied by 80 households in a pocket of slum housing [8]. Before the flat construction, intensive meetings with decision makers from the city officials and the community were done, to agree on the concepts accepted by the community. The rental flat Dupak was built on city government land, previously unauthorized and incrementally occupied by the people.

The flat dwellers were given perpetual lease right from city government at a rate of Rp. 5000,- in 1989 [8]. The lease is transferable and the flat maybe sublet and also be used as collateral to the bank. The children can inherit the flats without difficulties. Hence the flat can provide legal shelter for the dwellers and better living conditions, with access to adequate water and sanitation. The inhabitants were happy with the flat, however after 20 years the physical conditions of the Dupak flat should be improved.

2.2 Living Conditions at Sombo Flat

The Sombo flat consists of 11 unit flats, which were built in phases. Each phase completed within 8 months. Units A and E were firstly built in 1990, and the facilities were based on the people needs and preferences. The facilities include small shops, mosque, primary school and kindergarten. The people were given compensation money to stay at other houses for 8 months before the flat was ready for habitation.

Most of the dwellers agreed to move to the flat and received the same room areas as the areas of their previous houses. Each dweller was given permission letter to live in the flat and this letter is not transferable. All dwellers were not allowed to make changes to the building.

The dwellers accepted the flat as their new houses and they think that the flat have more facilities than their previous houses. Also they have no other choice. The living conditions in the flat were healthier than in their old houses. Enough electricity water and toilets; each level has prayer room and

each room has its own veranda. Children play at the verandas or in the flat hall and sometimes in the garden.

In the long run the living conditions are worse since some rooms were divided into two and sub let to other family. The small room space 3x3 m² is not up to standard, since this room was occupied by one family with 4 or 6 children. Hence one person lives on about 1.2 m², whereas the minimum standard is 7 m² per person (including common facilities). The 1.2 m² space per person is just the same as the condition in the old slum settlement. Based on this condition people living condition improved at the new flat, but after more than 10 years the healthy condition in the flat decreased. Such condition should be addressed and solved.

2.3 Living Conditions at Penjaringan Sari Flat

The Penjaringan Sari flat built in 1995 is easy to access and situated at the housing areas in east Surabaya. The public transports pass this flat; support the dwellers' need of transportation to work and to reach other areas of the city. The dwellers are scavengers and other people moved from slum settlements around Surabaya. They accept to live in the flat, although living on the ground is more acceptable. They think that the flat has enough facilities, such as water, electricity, public telephones and television, kindergarten, prayer room on each level, parking area for motor bikes on the ground and meeting room in each unit-flat. In general the living condition of the dwellers in the flat is better than in their previous slum houses.

Some unsuitable conditions in the flat are important to be addressed, such as the lack of maintenance of common facilities, broken ceilings which are not fixed, electricity cables which are not properly installed, and inadequate safety railing at the terraces, which cause children fell down from the upper level. Particularly the broken ceilings cause the rain pour into the building.

2.4 Living Conditions at Urip Sumohardjo Flat

The Urip Sumohardjo flat built in 2005 was to provide better shelter and living environment for the original dwellers of the old flat built in 1982. The new flat should keep the social structure already existed. With the U shape of the flat social gathering of the community can take place in the inner court.

Similar to the other low income flats in Surabaya, each unit-room was 3x6 m² with 2x3 m² for toilet, kitchen and cloth drying place. This was improvement to the other flats where toilets and kitchens were grouped together in common areas. The private toilet and kitchen were accepted and preferable by the dwellers.

Supporting facilities are prayer room, administration office, water from wells and city water supply, and electricity. Some small shops or stalls were built in front of the flat, for the dwellers to sell drinks, foods or other things. The flat dwellers are happy with their new flat.

3. THE NEEDS OF PROPER CONTROL, MAINTENANCE AND REPAIR

Based on past experience and research, the low income flats always need control, maintenance and repair [3]. Regular control of the use of space and common facilities can keep the occupation of space as planned. The communal facilities available in the flat were intensively used by all dwellers, hence maintenance to keep them in order is very important. The broken components of the flats, particularly at the flats already occupied for more than 5 years, should be repair. The proper control, maintenance and repair can only be done if there is good management in every flats.

3.1 The Formation of Dweller Association

As dictates by the local government Surabaya regulation [7], the dweller association must be set up in every flat. The dweller association is headed by the head of each unit flat, who is responsible in the management of each unit-flat. All flats have their own dweller association, however the effectiveness of each association in managing the flat is questionable.

3.2 Maintenance and Repair Needs at Dupak Flat

Generally the dwellers at Dupak flat were happy to live in the flat since the flat was clean and the facilities were adequate. The right maintenance keep the flat and garden clean and green. Crime was controlled through environmental safety system, organized within each unit-flat and coordinated among all the flat units [9].

Leaking at the ceilings was the most problem in the building. During the rain the flat rooms were wet and unhealthy. This condition showed that repair of building component was not easy. The dwellers thought that the payment of the repair should be bear by the government, since they have paid the flat rent. On the other hand, since the flat rent was cheap (Rp.15.000,- for ground floor, Rp. 10.000,- for second floor and Rp. 5.000,- for third floor) the money for the repair was inadequate. This problem must be solved to keep the dwellers and the building healthy.

Other problem was the flood at the ground floor of the flat. Some dwellers who own money increased the floor level up to 30 cm higher than the original floor level. The floor level should be increased with government subsidy.

Problem of inadequate space was common among the dwellers. Those who live on third floor could create additional space at the roof space. This kind of extension needs control, for the safety of the flat structure.

3.3 Maintenance and Repair Needs at Sombo Flat

The dwellers at Sombo flat were happy with the available supporting facilities, such as electricity, water, prayer room, meeting room and other communal rooms and hall. Maintenance of the room and cleanliness of the garden need attentions. The dwellers association should work more effective to keep the flats and the environment healthy. Broken ceilings and floors need repairs and this problem could not be promptly solved.

Most common problem was inadequate space. Survey done in 2007 showed that the dwellers need additional space (10). For this reason they extended the flat room by adding the room level. The additional level was of timber structure with about 1 m height. Hence the ceiling height of the flat room was partly reduced to 2 m. This condition made the room crowded, air movement and light from outside disturbed. This problem is important to be solved, since in the long run, people usually need more spaces. Design innovation of the flat to cater the process of the dweller's life must be available.

Proper control of the additional structure of the room level is important to keep the structure safe.

3.4 Maintenance and Repair Needs at Penjaringan Sari Flat.

The problems in Penjaringan Sari flat was the deterioration of the flat, after had been completed in 2003. The materials of roof, floor and pavement need repairs after 5 years. Since maintenance fund is not available, the repair is always difficult.

Proper control of the use of space is important to keep the flat as decent housing for the dwellers. In Penjaringan Sari flat, one room was occupied by one household with 12 persons. The 3x6 m² room should cater the need of 12 persons, meaning that one person only has 1.5 m². This is far below the standard of 7 m² per person (4). Proper solution to this problem is very urgent.

Other problem was dealing with the safety of living in the flat. The railing at the balcony must be improved to avoid children falling from the upper floor.

3.5 Maintenance and Repair Needs at Urip Sumohardjo Flat.

Different from the other flats, the Urip Sumohardjo flat was occupied during 2006. The condition of the building was still good, even though some

overhangs need repair. The repair must be done as soon as possible to avoid further deterioration. Other physical problem was the broken of the room floor. The room dweller had been waiting for one month, but no repair was done. The dwellers association was good and could keep the flats safe for habitation.

Some dwellers need additional space and they used the balcony as a room. Hence the balcony was covered with timber board. This practice could prevent the light coming into the room. Control of the space usage should be bear in mind to avoid further deterioration.

4. CONCLUSION

The slum settlements can be upgraded by providing low income flats which are supported with adequate facilities and more healthy conditions. Generally the flat dwellers accepted the flats since they have no other choices.

The formation of dwellers-association in every flat is particularly important since this can support the management of the flats, such as keeping the flats and the environment clean and healthy, fixing the broken components of the flats, controlling the crime to keep the flats safe for living. The dwellers-association can be effective only if the people involved in the association are willing to work hard for the management of the flat.

However, the control of the space usage is not easy to be done, if there is no strict regulation about this. People always need more space if their family member increased.

Innovative design solutions should be found, to cater for the need of additional spaces in the future, bearing in mind that the flats' lifespan should be about 20 to 30 years. For example by providing split level in the flat room if it is required. Thus the ceiling height of the room should be extent to a minimum of 4 m to cater for the additional split level. At the same time, cross ventilation and light penetration into the room should be designed according to the need of split level in the room.

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POSTER

P - 1

Revitalization of Kampung Peneleh Surabaya – An Idea and Concept

Wahyu Setyawan

ABSTRACT

Kampong Peneleh is one of the oldest kampong in Surabaya, kept deep memory of national history as well as Surabaya history. So many artifact lay on these kampong, but most of them in vulnerable condition of destruction, caused by nature and human activities.

Due to Surabaya vision as Metropolitan city with unique character, kampongs play strategic role and position. So many International award received by Surabaya because of kampong development many years ago. It proved that Surabaya seen on those kampongs, as unique character that differencing with other city in the world, and Kampong Peneleh is one example of good potential development.

To revitalize these kampong, students of architecture has exploring their idea and concept based on real condition on the field, to make over some small part of kampong. The main idea is how to make these kampong live and vibrant, with unique character and give significant contribution for tourism attraction of Surabaya city. Without neglecting of social aspect of the community, students try to redesign some places and parts, from bad condition, into interesting elements, especially in public facilities.

These posters show, how those young generations try to understanding of Surabaya city, as a unique metropolitan city, that different with others. They just rely on humble architecture of kampong, not on sophisticated architecture of modern buildings.

P – 2

The New Concept of The Middle Apartment at Kalimalang for Upgrading Resettlement

Johanes Krisdianto

P – 3

Informal Settlements Field Trip

Wiryono Raharjo

ABSTRACT

The field trip was initiated by Kim Dovey and Wing Raharjo with the support of the Faculty of Architecture, Building and Planning at the University of Melbourne. Collaborating partners were Universitas Islam Indonesia in Yogyakarta and Yayasan Pondok Rakyat, which is an NGO working in Sidomulyo/Kricak as an action and research group on urban development.

The agenda for the trip was continuously evolving but the key goals were:

- To produce maps and design prospect that might be of use to this community in struggles for land tenure and ongoing development.
- To enable both Australian and Indonesian students to better understand the issues and urban morphologies of squatter and slum communities.
- To generate peer-to-peer learning between students and collaboration between institutions.

A total of 31 students were involved – 17 from the University of Melbourne (including Australian, Chinese, Japanese, Malaysian, and the US) plus 14 Indonesian. Students were divided into group 3 or 4, each with a leader and 1 or 2 Indonesian who were also translators. University of Melbourne students were a mix of Architecture and Landscape Architecture, with a small number of Urban Design, Property and Planning; they ranged from undergraduate to PhD. Indonesian students were primarily undergraduate architecture students.