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**Humanistic Planning and Urban Flood Disaster
Governance in Southeast Asia:
Metro Manila and Jakarta**

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Humanistic Planning and Urban Flood Disaster Governance in Southeast Asia: Metro Manila and Jakarta¹

INTRODUCTION

It was eleven o'clock in the evening when the vice-leader of the residents' committee picked up his handy-talkie. The device had been making noise over the past hour since we started sitting together to do a mapping exercise of the flood-prone area. I could remember vividly the conversation he had over the handy-talkie. The person on the other end, a male voice, said that water had just been released from the Katulampa water gate. "Please prepare the residents," said the man on the other end. Afterwards, the vice-leader did a quick counting and said, "Around six in the morning." We all looked at him after he said that, and he continued, "The water will come at six in the morning." Then he explained that it would take approximately seven hours for the water to flow down from Katulampa water gate on the upstream of Ciliwung River to Kampung Pulo, the urban village downstream in Jakarta. Forty-five minutes after that announcement, we ended our mapping exercise because it was near midnight. But the community leaders already did a round of announcement to inform the residents to get ready for a water invasion the next morning.

(Field note, August 2013)

Flood risks are closely associated with urban riverfronts (Spits, Needham, Smits, & Brinkhof, 2010). Rivers and environmental risks associated with them are generally viewed as landscape constraints and opportunities beyond localities. A flood is often framed as having its own agency, which is "more than human". The social and political construction of flood reflects the mix of human activities both in the city and its hinterlands, larger climatic conditions, and the spatial relationship between livelihoods and the river. Walker et al. (2011: 2317) considered urban flood as a field with "problematic distinctions" between its natural and social explanations. More than just excluding each other, each of these explanations is continuously in danger of dominating the other or being subordinated from the other. These problematic distinctions are not new, but the consequences are real when disasters affect human lives.

What are the possible humanistic approaches to urban disaster governance? The motivation for the research behind this paper comes from years of observation in urban flood issues in several Southeast Asian cities. Many studies on the geography of floods and political trajectories of flooding cited in this paper are based on localities in the UK, which bears a lot of differences with the Southeast Asian contexts. However, these researches still provide useful references to the framing of floods in the overall urban governance. This paper will also rely much on ethnographies and interviews in several localities in Jakarta and Metro Manila. The main concern in this paper is in locating the role of local communities in urban flood disaster governance amidst other approaches that may be more dominant.

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This paper will begin by an overview of humanistic planning perspective and hegemony in social and political trajectories of floods. It would then question these principles in Southeast Asian cities, especially in terms of community participation and the presence of large-scale interventions in flood risk mitigation projects. Existing involvements of riverbank communities in flood disaster governance are gathered through interviews and ethnographic field observations. Finally, the paper will conclude with the usefulness and limitations of humanistic planning in returning the priority of urban flood disaster governance to people's lives.

HUMANISTIC PLANNING AND TRAJECTORIES OF FLOODING

Human flourishing is a central idea in the conceptualization of cities. Urban theorist Lewis Mumford (1931) considered social action – an expression of an elaborate community culture – as the main essence of the city. Cities are where health, social ills, and fragmented societies grow, but the city is also where human history is made, knowledge is developed, and democracy flourished (Childe, 1950; Engels, 2007 [1844]; Marx & Engels, 1978; Simmel, 1950; Tönnies, 1963 [1887]; Weber, 1958; Wirth, 1938). However, the hegemony of rationalism in urban planning has framed human flourishing as a seemingly idealistic view to be the ultimate goal of developments, projects, designs, plans, and planning processes, because of the difficulty in quantifying the measurement. There has been increasing fascination on quantifiable measurements in urban planning for it makes complicated urban issues comprehensible (Friedmann, 1992).

Humanistic planning requires processes that are fully aware of human consequences of planning (Fromm, 1977). Another closely related term is community planning, which refers to the physical manifestation of needs, capacities, and aspirations of individuals and their social groups (Aronovici, 1951). Community planning requires interactions with individuals as active agents of social change, in which processes and subsequent plans facilitate individuals' ability to be socially active as an achievement of human values. Human consequences can span across human rights and opportunities to human flourishing – both are clearly interrelated, as these opportunities to human flourishing are listed within the Universal Declaration of Human Rights in 1948. Referring to Radin's writing in 1987 on human flourishing, Friedmann (1992) acknowledged that the term is both evocative and open-ended. The limits of that flourishing may have to be constantly redefined, as the term relies on what it means to be human beings and how a human being can live up to his or her full capacity. On one hand, meanings are inseparable from cultural contexts that are often blamed for identity-based social segregation and discriminative practices, such as along gender lines, race, and religion. On the other hand, rather than thinking about culture as a possible obstacle to human flourishing, culture in fact features a humanizing effect that is a requirement to allow human flourishing. The inherent degree of open-endedness of this term requires continuous considerations of philosophical inquiry in urban planning, which points out to the importance of humanism in planning processes.

What is behind the hegemony of rationalism in planning, and what are the implications in urban flood trajectories? Lefebvre (1974) pointed to capitalism as the cause of diminishing consideration for human flourishing in the production of urban spaces. The mainstream urban development trajectory has assumed that economic growth represents the necessary condition for development, and that growth is maximized through capitalism. Consequently, human beings are reduced into population numbers, and such practices reduce the possibility of philosophical engagement, a requirement for better understanding of human flourishing in practice, in urban planning.

The commodification of land into private property rationalizes spatial relationships in the city, but urban spaces reflect more than the capitalist mode of production. Problematic distinctions between natural and social trajectories of urban floods are reflective of the dichotomy between the broader natural and social sciences as had been elaborated by Max Weber (Weber, 1946 [1922]). With inherent abstractions and generalizations, specific engineering and statistical tools are instruments to enable rational decision making in developing urban plans. Decisions are made following the evaluation of alternatives compared to the goals and the outcomes of the plan (Friedmann & Hudson, 1974). The reliance on the rational model, economic determination, and engineering precision is reflective of the paradigm that carefully and intellectually calculated plans are the best solutions to the problems that are perceived as beyond the human realm, such as floods from rivers.

The built environment embodies physical reflections of ideologies in the society. As settlements grow into cities, sites along riverbanks are still places of dense settlements and developments. On one hand, images of urban development and lifestyle often make riverfronts attractive sites for housing and recreation. On the other hand, cities with lack of infrastructure networks and services continue to situate rivers as infrastructures. Rivers are historically chosen as sites of settlements because of their capacities to supply water and transportation (Spits et al., 2010). Political ecologists have looked at the geopolitics of water vis-à-vis engineering narratives, economic practices, and global money flows (Swyngedouw, 2004). In these analyses, the process of harnessing 'natural' water to sustain urbanization imposes water's subjectivity into a struggle for control and access. Meanwhile, urban development subject urban water bodies to industrial, domestic, and commercial pollution, which is seemingly contradictory with the pursuit of reliable water supply to sustain urbanization.

Such paradox perpetuates the social and political reasoning of urban water scarcity. The scarce water's important role in the circulation of money and capital positions water landscapes – not just consumable water but also the natural and built environment in the hydrological cycle – into precious commodities that should be mastered by existing social and political powers to secure market relations. In places where land and risks are measured as commodities, the instability, intrusion, and limitations imposed by flood waters on activities and services frame floods as 'bad water' (Walker, Whittle, Medd, & Walker, 2011), but waterfronts remain as contested places in the city. They represent service convenience and potentially attractive lifestyle environments, but urbanization-induced environmental degradation and land deprivation towards socio-economically marginalized groups also subject water landscapes into opportunities to construct homes as their urban existence.

Despite differential flood impacts based on economic class, the dominant paradigm in urban flood solution projects is not just about class-based hegemonic construction. Urban floods are socially constructed as a result of human activities, nonhuman objects and processes, which produce the condition of being flooded (Walker et al., 2011). Flood is socially and politically constructed as risk; urban flood-related interventions are designed to reduce risk; impacts are defined as material, physical, and mental well-being; all are typically represented in quantitative terms. "Flooding is overflowing with issues that become mobilized by, and in turn mobilize, various forms of expertise" (Donaldson et al., 2013: 2). The sustenance of expert-based approach in solving flood is more than just through education as a tool to maintain consensus of the subordinate to be dominated (Gramsci, 2010). It is also beyond diverse political struggles to reach moral, intellectual, and political leadership (Laclau & Mouffe, 2001 [1985]; Rosol, 2013; Torfing, 1999). The invasions of flood water in settlements are intrusions of livelihoods, transgressions of the home, damages to infrastructures and disruptions of economic activities. The badness of flood waters is reflective of how the urban infrastructure, buildings and spaces are planned, designed and built. Floods do more than exposing dependencies on consistently dry urban lands for livelihoods; they also expose how the production

of space is based on the premise that the controlled and planned built environment would protect economic activities against uncontrolled nature. The physicality of flood intrusion against the predictability of the built environment perpetuates the hegemony of environmental engineering interventions as a solution to protect urban economies.

The prioritization of infrastructure improvements reflects the general assumption in mainstream environmental improvement trajectory that engineering interventions are correlated with the protection of urban economies, and the assumption that the sustainability of urban economies is good for the people. These assumptions are problematic in humanistic terms, as affected communities may become more marginalized due to their ineligibility for benefits as urban citizens. Carol Aronovici wrote in 1951 that “the replacement of slums with huge, compact and monotonous housing projects may have saved some families from the slums, but they have not reduced the general congestion of the city, nor have they, in most instances, served to provide shelter for those who have been driven from the slums to other slums, because many families are unable to meet even the low cost of public housing” (Aronovici, 1951: 24). Until today, the emphasis on affordable land and structures retains “huge, compact and monotonous housing projects” as housing models for resettled, typically poor and landless, urban populations.

Notwithstanding levels of uncertainties, probabilities, and unaccounted variations that are intrinsic in quantitative analysis, the hegemony of engineering and economic calculations in flood risk management persists as the answers to problems beyond the human realm. Engineering options and tangible economic outcomes continue to dominate decision making (Penning-Rowsell & Pardoe, 2012). Since Gilbert White’s research on ‘Human Adjustments to Floods’ in 1945, geographers in the UK and in the USA have critically questioned the focus on engineering (Hewitt, 1997; Macdonald, Chester, Sangster, Todd, & Hooke, 2011; Penning-Rowsell & Pardoe, 2012; Smith & Tobin, 1979; White, 1945). The domination of engineering approaches tends to exclude community participation, or only have tokenistic inclusion at best, despite the floods’ considerable impacts on community livelihoods. (see Arnstein, 1969 for levels of citizen participation). The strong material and spatial presence of large-scale projects typically last through generations to perpetuate engineering solutions to environmental problems such as floods.

A review on social science publications on urban floods, which are mostly based in the UK, reveals two streams of more humanistic approaches in urban flood solutions. The first is the inclusion of the people dimension to complement economic analysis (Johnson & Penning-Rowsell, 2010). In line with this stream is the approach to analyze differential economic impacts of flood risk management measures: who benefits and who loses from certain measures. A pragmatic justification of this approach is that tangible economic impacts are still dominating decision making and outcomes. In the case of the UK, this approach uncovers that the low-wage manual workers are the ones who lose the most because of the reduction of flood repair and replacement activity, while the insurance companies benefit the most because premiums do not decline along with the reduction of risks (Penning-Rowsell & Pardoe, 2012). The second is public engagement in technological flood modeling exercises. This stream is based on the insufficiency of existing scientific knowledge, due to its association to specific institutions that communities distrust. Landström et al.’s study in a small town in the UK (2011) suggested engagement of local residents with science, not just as representations of stakeholders but as partners in coproducing knowledge. In this case, the role of the scientists become important, to dissociate themselves from the distrusted institutions and to be willing to engage in open-ended research agenda (Landström et al., 2011).

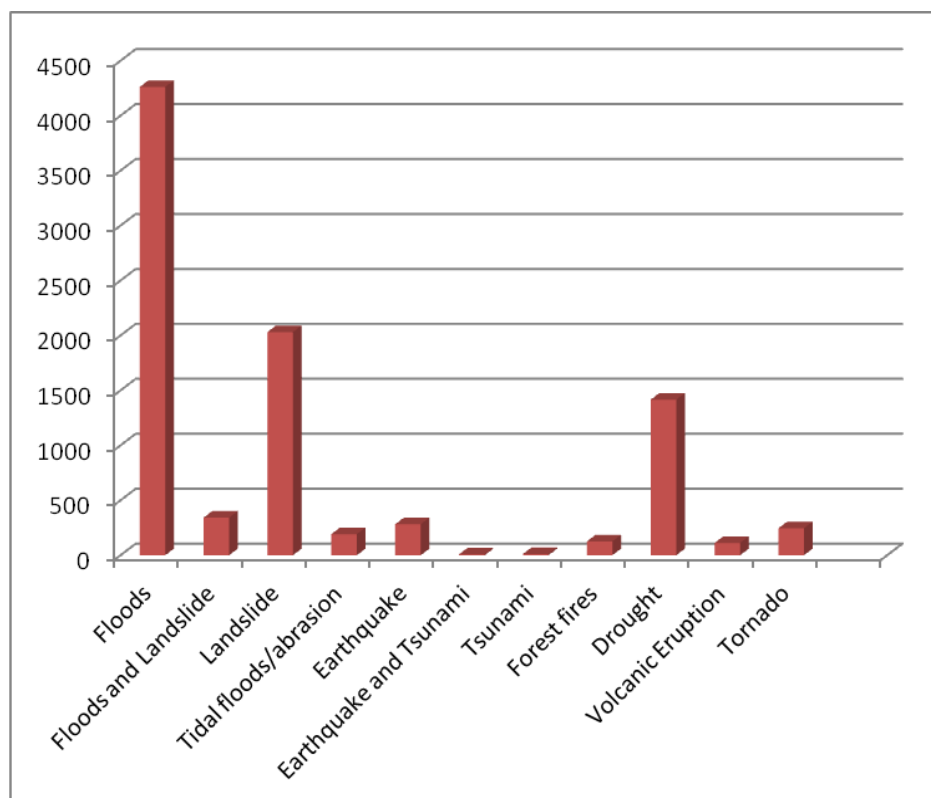
While the two streams bring back the ‘people’ dimension to flood solutions, they highlight two aspects of humanistic planning as counter-hegemonic exercises. First, the understanding of flood as risk persists – unsurprisingly, considering the unchanging paradigm in the production of space, and

the spatiality of floods makes social construction of floods inseparable from the production of space. Therefore, the hegemony of engineering and economic approaches to flood solution continues. Although the people dimension is brought in, it is not yet the humanistic planning that put human flourishing in the center. Second, the people dimension relies on the “organic intellectuals” (Gramsci, 2010) that can unfold the subaltern to transform the ideological orders (Reed, 2012). Human flourishing and humanistic planning are not immediately associated with flood mitigation projects because of the framing of urgency and the social construction of floods as livelihood intrusions, all of which put emphasis on pragmatism.

FLOOD DISASTER GOVERNANCE IN SOUTHEAST ASIAN CITIES

Although several largest cities in Southeast Asia, such as Bangkok, Jakarta, and Metro Manila have been affected by relatively severe and paralyzing floods in recent years, floods are not new to these cities. Before becoming the capital of Thailand more than 200 years ago, Bangkok was a fishing village. In the course of its urban development flooding has occurred every rainy season (Lawler & Cullivan, 1972). Vernacular houses on stilts and boat transportation reflect the inseparable societal relationships with water and the nature as “amphibious communities” (Jumsai, 2011). Comparably, typhoons are regular hazards in the Manila Bay area of the Philippines, with an average of 19 to 20 typhoons annually (PAGASA, 2004). Flash floods have been noted during the Spanish colonial period in Manila (16th-19th centuries), during which the streets of Binondo district would be “flooded with then crystal clear floodwaters” (Zoleta-Nantes, 2002: 245). In Jakarta, the earliest flood was recorded in the 5th century and the Dutch colonial government kept records of recurring floods since the 1600s. Floods also remain the most frequent disaster in Indonesia for the past 200 years (Figure 1).

Figure 1. Number of Incidents per Selected Disaster Type in Indonesia, 1815-2013



(Source: Badan Nasional Penanggulangan Bencana, 2013)

Regular floods turn into potential disasters in Bangkok when considerably rapid developments occurred during the city's industrialization, marked by dams with huge reservoirs and landfills for massive developments of industrial and housing estates in the metropolitan area (Cohen, 2012). In Metro Manila, rapid urbanization and migration has been blamed as the cause of deterioration of its waterfronts and drainage system (Zoleta-Nantes, 2007). Jakarta's geographical location as the deltaic plain of 13 rivers has always been prone to floods, both from the river and the tidal floods (Firman, Surbakti, Idroes, & Simarmata, 2011; Steinberg, 2007; Texier, 2008). However, the increasing magnitude of floods is inseparable from urban development since 1945 that has progressively "waterproofed" the surface, preventing water from being absorbed to the ground. This leads to increasing direct runoffs and diminishing groundwater recharge (Abidin et al., 2011; Texier, 2008). Similar to Bangkok, urban development also caused land subsidence that has worsened flooding problems in Jakarta (Abidin et al., 2011). Moreover, forested areas in the upstream of Ciliwung River, the main river in Jakarta, has been continuously decreasing to make way for not just tea plantations but also residences, settlements, commercial functions (Akmalah & Grigg, 2011; Texier, 2008).

Studies have shown that urban developments are triggers to progressively increasing magnitudes and frequencies of urban floods. A study of land use change patterns in three delta regions in Southeast Asia: the Mekong Delta in Vietnam, the Irrawady Basin in Myanmar, and the Chao Phraya delta in Thailand concluded that economic developments had significantly reduced the natural capacity of the delta to disperse and reduce flood waves (Thi, Gunawardhana, & Kazama, 2012). Flood mitigation projects usually deal with flood protection, downstream resettlement and urban river rehabilitation that are constructed to reduce flood risks, but not directly addressing the flood. The next two sections will illustrate in greater detail river projects in Metro Manila and Jakarta. The discussion will analyze how humanistic planning is reflected in flood disaster governance in the two cities and whether community involvement functions as a counter-hegemonic force.

Metro Manila: Floods and Dirty River

Metro Manila is the National Capital Region of the Philippines with more than 11.5 million residents in 2010 (NSO, 2010). The region is composed of 16 cities and 1 municipality that overall consist of 1,705 barangays or local districts (NSCB, 2011). The Pasig River system stretches 27 kilometer between the Manila Bay in the West and Laguna Lake in the east. Pasig City is on its North, Makati and Pateros Cities are on the south bank of the river. San Juan River, Marikina River, Napindan River, and the Pateros-Taguig River are the tributaries of Pasig River (MBEMP, 2006). The river flow changes seasonally; in dry season, it flows from west to east while in wet season the water flows from Laguna Lake in the east to the Manila Bay.

Clean water in these rivers has its place in Metro Manila's legends of its glorious past. Water bodies were central in transportation, trade, and commerce, as they were centers of pre-Spanish colonial era settlements. The early farming communities were river dwellers called '*taga-ilog*' (PRRC, 2010), who resided in clustered huts and later also became places for the early Chinese settlers. The Manila Bay was the settlement of the Islamic tribal community under Rajah Sulayman who used the area as a gateway for commerce. The *Katipuneros*, a rebellious force against the Spanish government, used the river system to attend their secret meetings and to recruit members from towns along the river banks. The river system was also used by both Americans and Filipinos for delivery of supplies during the Filipino-American War.

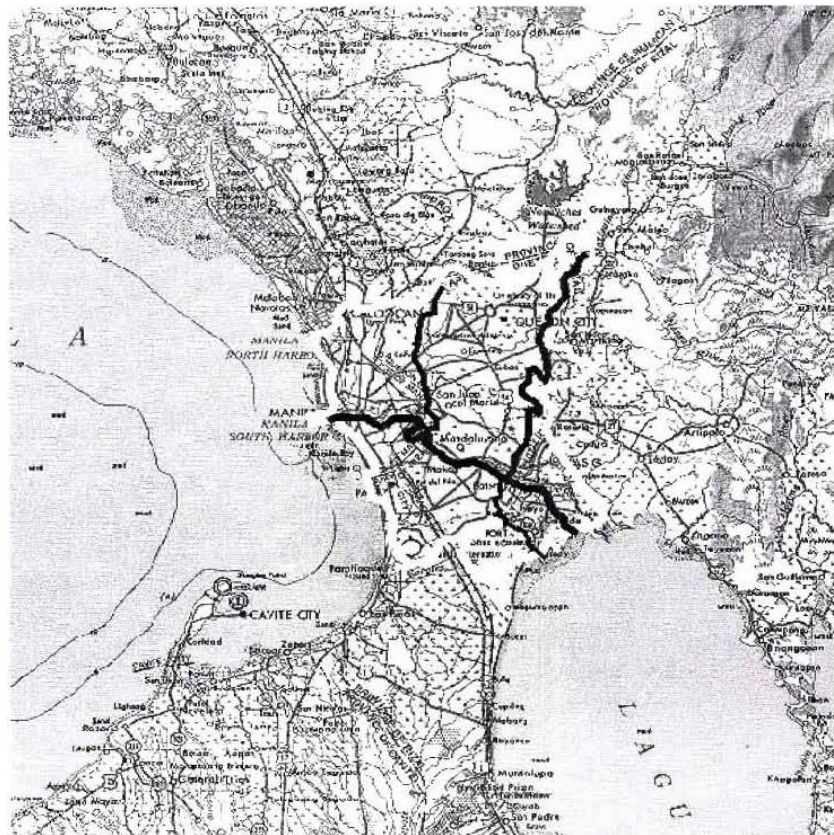
Decades of urbanization gradually decreased and finally diminished the river system's roles in the social, economic, and defense activities. As industrial, commercial, and residential areas developed, wastes from these establishments were often dumped directly into the waterways. Solid waste management was in crisis as 6,700 tons of waste per day was not processed and a good portion went directly into waterways in Metro Manila and neighboring provinces (Lindfeld, 2004)². Reclamation along the shores of Marina Bay produced additional building land for the city, but they also obstruct the flow of water to the sea and increased flooding incidences in Paranaque and Pasay cities of the metropolitan region (Zoleta-Nantes, 2002). At the same time, land use and land cover changes in the National Capital Region's watershed area had contributed 25-50% loss of the watershed's top soil, increasing sedimentation load of the river (Zoleta-Nantes, 2002). The Pasig River was declared biologically dead in the 1990s (PRRC, 2010; Tigno, 2009).

Significant floods that were covered by the media had occurred at least 12 times between years 1953 and 2001. Three major causes of flooding has been identified as huge volume of water from Sierra Madre; drainage capacity constraints in Metro Manila's core area; and low-lying communities around Manila Bay and Laguna Lake (DPWH, 2013). Polluted river system brought an end to crystal clear floodwaters, bringing instead solid wastes as well as health consequences of diarrhea, typhoid, influenza, and malaria. In 2009, Typhoon Ketsana, also known locally as Ondoy, hit Metro Manila and caused 747 fatalities. Zoleta-Nantes (2002) found that although the monetary value of the loss suffered by the urban poor may be smaller than the wealthy residents', the flood impacts have more severe impacts on their livelihoods, daily survival, and their ability to deal with flood hazards in the future.

Initiatives to revive the Pasig river system has begun since the early 1990s, focusing on cleaning up the rivers, improving water quality, and resettling informal families along waterways. In fact, even during Imelda Marcos' time as the acting Metro Manila governor in the 1970s, she wanted to restore Pasig River with floating casinos, restaurants, trees, and painted river walls. Her desires never materialize, although finally the Pasig River Rehabilitation Commission (PRRC) was formed to rehabilitate the Pasig River to transform it into a water body that works for transportation, recreation, and tourism. Much of the exercise, however, was focused on resettlement of population along the riverbank. These initiatives rely on existing and new laws and policies, including the Clean Water Act (2004), Water Code (1976), Ecological Solid Waste Management Act (2001), Environmental Code (1977), Urban Development and Housing act (1992), Philippine Fisheries Code (1998), Marine Pollution Decree (1976), Code of Sanitation (1975), and the Administrative Code (1987).

² Technical Assistance Completion Report, TA 3848-PHI: Metro Manila Solid Waste Management, Asian Development Bank

Figure 2. Pasig River and its Tributaries That Are Included in the Pasig River Rehabilitation Master Plan



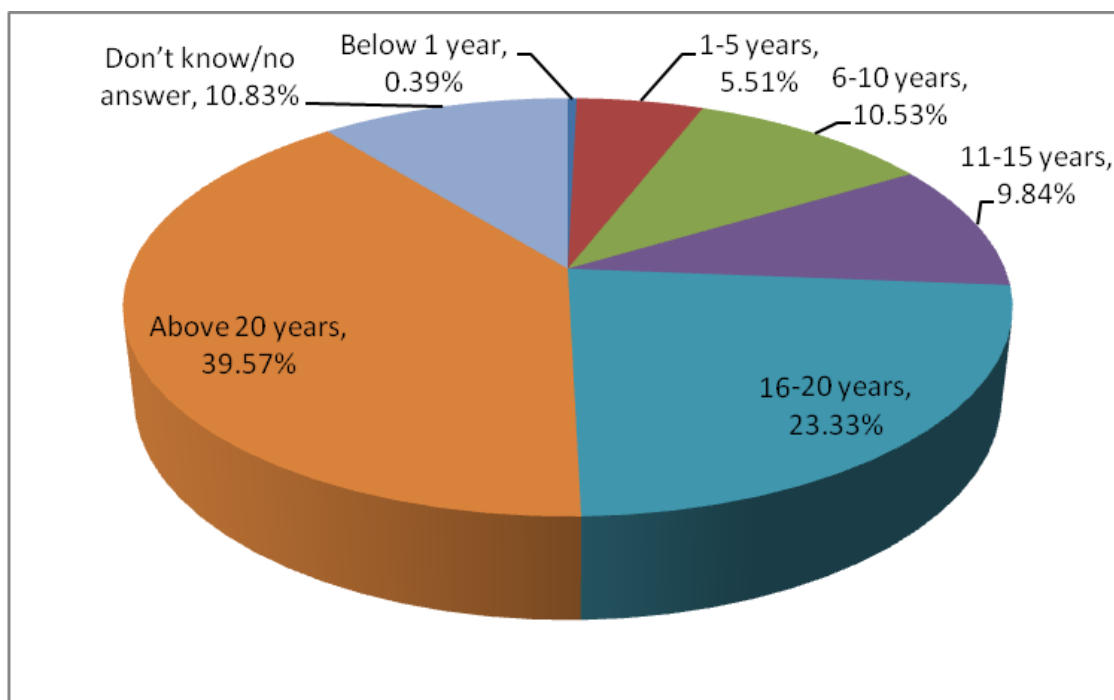
(Source: Pasig River Rehabilitation Commission)

The National Housing Authority noted that the National Capital Region is home to 544,609 households of informal settlers in 2007, which accounts for 21% of the whole region's total number of households. The growth and expansion of informal settlements are largely unregulated, and almost 20% of the households in this informal settler category settle in marginalized "danger zone" areas such as waterways, railways, roadways, sidewalks, aqueducts, under bridges, unstable ground and prone to landslides (Porio, 2011; Verzola & Barrientos, 2009). Not all informal settlers are in the lowest income category. Some of them may even be relatively wealthy for the measure of Metro Manila, earning up to Php 25,000 monthly from various sources, including business, remittance, salary, or pension.

Table 1. Number of Informal Settler Families Living Along Waterways in Metro Manila

Local Government Unit	Number of Informal Settler Families (2002)	Number of Informal Settler Families (as of June 2012)
Caloocan	5,985	6,012
Las Pinas	5,401	2,590
Makati	906	1,810
Malabon	611	3,991
Mandaluyong	616	662
Manila	12,807	2,249
Marikina	889	430
Muntinlupa	778	3,686
Navotas	10,450	6,017
Paranaque	4,677	914
Pasay	3,804	4,200
Pasig	1,443	7,449
Pateros	0	1,869
Quezon City	0	10,367
San Juan	100	1,375
Taguig	961	3,672
Valenzuela	313	2,837
	49,741	60,130

(Sources: Asian Development Bank, 2002; Singson, 2013)

Figure 3. Age of Residential Structure in Riverbank Communities

(Based on survey conducted in 1,016 residential structures, 2010)

Riverbank communities may well be vibrant with vendors sell fresh vegetable, fruit, and meat in front of houses, as well as various household utensils, toys, accessories, snacks, canned goods, and daily packed cooked food for workers, employees, or even fellow residents. Small canteens, barbershops, computer shop, repair shop, second hand goods can also be found in these communities. Besides home businesses, residents in these settlements may also have jobs within the Metro Manila region. Some of them provide labor for services such as being a carpenter, transport operator, domestic helpers, technician, construction workers, or the likes, but there are also government employees, teachers, policemen, and other ‘formal’ jobs. This is despite the lack of security of tenure in housing, jobs, and basic services for a large portion of Metro Manila’s population (Porio, 2011). However, these communities are far from the idealized vision of the future post-rehabilitation Pasig River (Figure 4) that feature tree-lined boulevards and thriving urban ferry services.

Figure 4. Vision of Future Pasig River



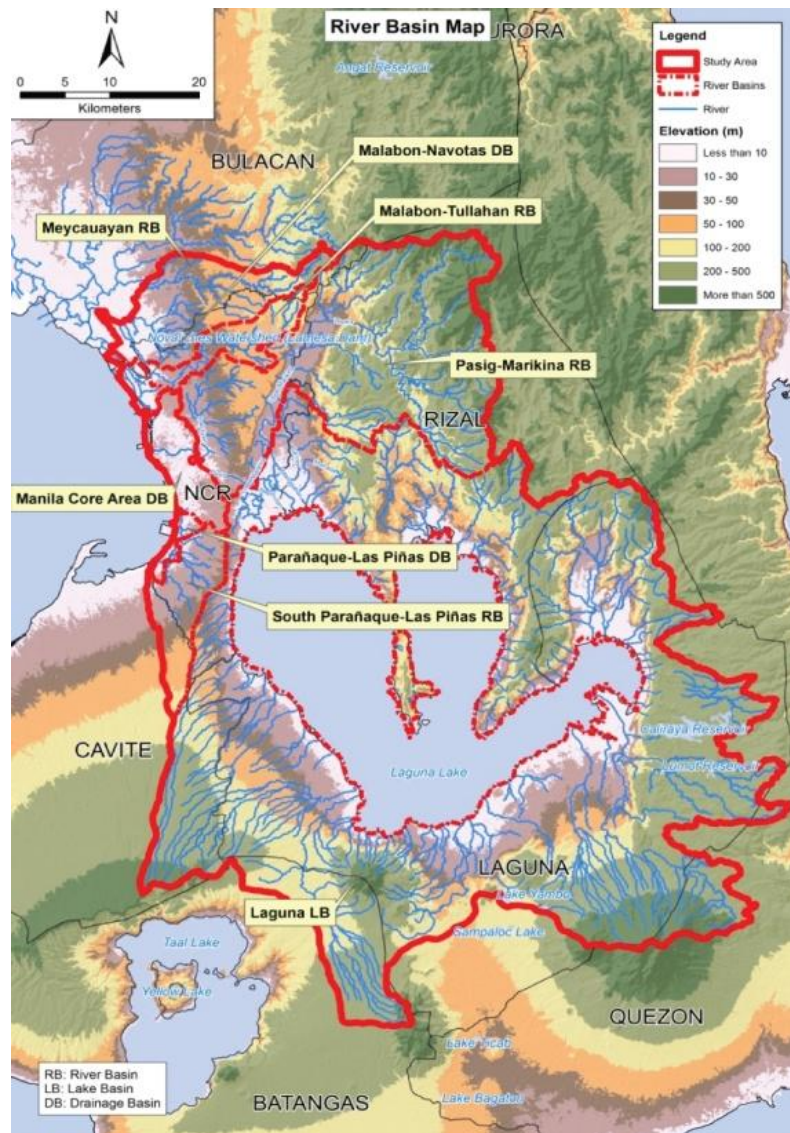
(Source: Pasig River Rehabilitation Commission; design by Palafox)

These riverbank communities are the first to be hit by floods when a typhoon comes to the city-region. Informal settlers have long been identified as vulnerable to flood-related socio-economic disruption (Asian Development Bank, 2005)³. In her study of several riverine communities, Porio (2011: 438-439) noted that the people have crafted a “water-based lifestyle”, which she defined as “getting used to the regular rise of dirty water in their midst and adjusting their household routines and work patterns according to the demands of the rains, floods, and water surges.” Adaptations include firstly constructing houses on stilts or adding second floors to existing homes and the local government’s installations of water diversion pumps (*‘bombastik’*) to divert floods to other areas. Despite these physical, social, and psychological adjustments, Porio considered Metro Manila’s disaster preparedness as “very low” – not just of the riverbank communities, but also the better-off households and the government officials. A technical assistance report by the Asian Development Bank in 2010 noted that the creation of sustainable and disaster-resilient human settlements in Metro Manila remains a challenging agenda (Steinberg, 2010).

³ Technical Assistance to the Republic of the Philippines for Preparing the Metro Manila Urban Services for the Poor Project (TAR-PHI 38398)

After Typhoon Ketsana hit Metro Manila and submerged almost 80% of the capital region, the government ordered forced eviction and relocation of informal settlers along identified waterways (Romero, 2009; Sy, 2000; Teves, 2009; Wilson, 2009). A US\$ 1.5 million technical grant from the World Bank and the Australian Agency for International Development (AusAID) financed a year-long flood risk assessment study from February 2011 to February 2012 to prepare a comprehensive flood risk management plan.

Figure 5. Study Area of the Flood Risk Assessment Study in 2011-2012, Covering the Entire Metro Manila and the Surrounding Areas That Include the Provinces of Rizal, Laguna, and Parts of Bulacan, Totaling 4,354 Square Kilometers or 435,400 Hectares (DPWH, 2013)



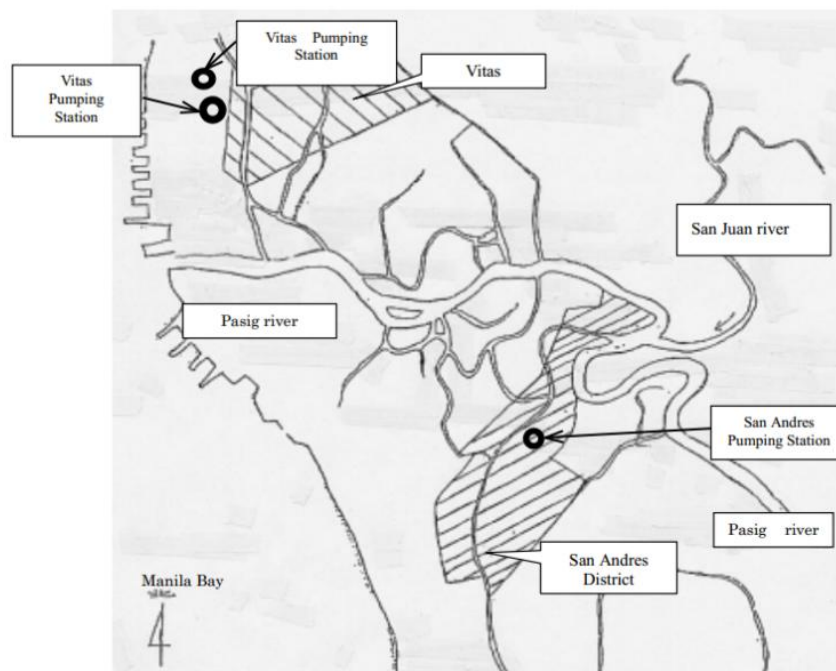
The Department of Public Works and Highways (DPWH) specifically listed the following as guiding principles for master plan development: integrated water resources management approach; resilience to floods through structural measures for river basins, waterways, Laguna lakeshore, as well as improvement of the urban drainage system; improvement of the Flood Information and Warning System (FIWS); establishment of an integrated and consistent flood risk management (FRM) institutional system; strengthening of community-based flood risk management in terms of land use

and solid waste; utilization of runoff waters as water resources; and reforestation and watershed management.

Table 2. Metro Manila Flood Control Projects, 1998-2012

Year	Title	Funds
1988-1998	Metro Manila Flood Control Project II	JBIC
2000-2003	Pasig River Environmental Management and Rehabilitation Sector Development Program	Asian Development Bank Loan, Local Government Unit
	Priority Areas, Flood Control Component	Locally Funded
	1. Lower San Juan River	
	2. Malacañang Area	
	3. Del Pan and Jones Bridge	
	4. Makati-Mandaluyong Segment	
	5. West Rembo Area	
	6. Construction of collapsed revetment in Barangay Guadalupe, Makati	
	7. Construction of collapsed revetment wall in Barangays Hulo and Buayang Bato, Mandaluyong City	
2002, 2009	Dredging and Sanitation Works in Pasig River	Belgian Government Super Subsidy Facility
2006	Flood Control & Sabo Engineering Project	JICA Grant
	Study on the Existing Drainage Laterals in Metro Manila (Feasibility Study)	JICA Grant
2000-2009 (still ongoing)	CAMANAVA Flood Control & Drainage System Improvement Project	Special Loan Package, Four Packages
2004	Pasig-Marikina River Channel Improvement Project	JBIC
2007	Metro Manila Flood Control Project – West of Mangahan Floodway	JBIC
2011	Pasig-Marikina River Channel Improvement Project (Phase III)	JBIC
2011-2012	Flood Risk Assessment Study	World Bank, AusAID

Although the actual Pasig River rehabilitation projects were not as glamorous as Imelda Marcos' ambitions in the 1970s, community-based flood disaster governance and management were directed for land use and solid waste. The post-Ketsana flood control plan project was not the first one. Three pumping stations were constructed under the Metro Manila Flood Control Project, which was funded by a 9 billion yen loan that was disbursed from JICA from 1987 to 1998. Post-Ketsana plan recommended structural measures that consist of a combination of a dam at the Upper Marikina River, a retarding basin, small dikes, dike/river wall construction, and dredging/excavation. The project was estimated to benefit 1.6 million people and save PHP 43 billion worth of flood damages (DPWH, 2013).

Figure 6. Locations of Pumping Stations under the Metro Manila Flood Control Project

(Source: JICA)

Figure 7. Proposed Interventions on the Pasig River System in the Flood Control Plan

(Source: DPWH, 2013)

Community-based flood risk management in the program was listed under ‘nonstructural measures’, which specifically include updating and implementing information and education campaign (IEC) programs, rainfall and water level monitoring by barangay disaster risk reduction and management councils, and construction of evacuation routes and temporary evacuation centers. Despite the existence of various civil society organizations that are active in various fields, such as the urban poor, women, senior citizen, workers, as well as various livelihood programs, not all Pasig River system rehabilitation projects involve civil society organizations. Referring to experiences in other cities such as Singapore, former Manila City mayor Atienza believed that only top-down approach would work in waterfront projects because of their urgent and practical nature that need much coordination. As he reflected on his label as a ‘destroyer mayor’, Atienza said he would have liked to have more community involvement but still felt that he was ‘pressed with time’ to finish the Manila Bay rehabilitation.

Meanwhile, informal settlements in Metro Manila are well-known as bases of political parties. Resistance towards eviction may be expressions of livelihood defense as much as opportunities to articulate political affiliations. Understanding spatial relations between the river and human flourishing becomes challenging since the existence of riverbank communities itself is contradictory: either as expressions of survival, marginalization, and deprivation from full acceptance as a citizen of Metro Manila; or as a place in which residents can access the social, political and economic activities of the metropolitan region and benefit from it, as shown by the employment and livelihood relationships between these communities and the larger city.

In-between these political intricacies, there are at least two models of community involvement in flood disaster governance in Metro Manila. Firstly, there are still civil society organizations who are actively working in the rehabilitation of Pasig River, such as the Sagip Pasig Movement. It pioneered the establishment of Clean River Zones (CRZ), the Community-based Waste Management (CBWM) project, public disclosure program, and the Annual *Lason sa Ilog Pasig* (Poison in the River) awards. One of its important achievements is the public disclosure program that publicly lists all industrial and commercial polluters of Pasig River.

“We got our niche also because of Lason (the shame awards).... Every year, we conduct a fluvial parade, and at the end of the parade, we disclose facts of polluting industries. We don’t really mind. So that’s how we separated path with Mrs. Ramos. We actually partnered with adjudication board of the DENR. And because these are public documents, we made EMB and LRDA our technical working group. So we gather BOD and compliance of industries, so we have on our master list, 4,000 polluting industries along the Pasig River, including government. So we actually gave government, City of Pasig and City of Manila a shame award... And all of them now have waste treatment facilities.”

(Interview with Myrna “Meth” Jimenez,
Secretary-General of Sagip Pasig Movement, February 2011)

The achievements of the Sagip Pasig Movement, however, largely depend on the cooperation of the Local Government Unit (LGU). Meth admitted that when the LGU is cooperative, the movement’s programs could proceed, but they cannot work at localities where the LGU would not cooperate. The political nature of LGUs and civil society organizations divided the river into socio-political sections, even when the whole river belongs to the same river system.

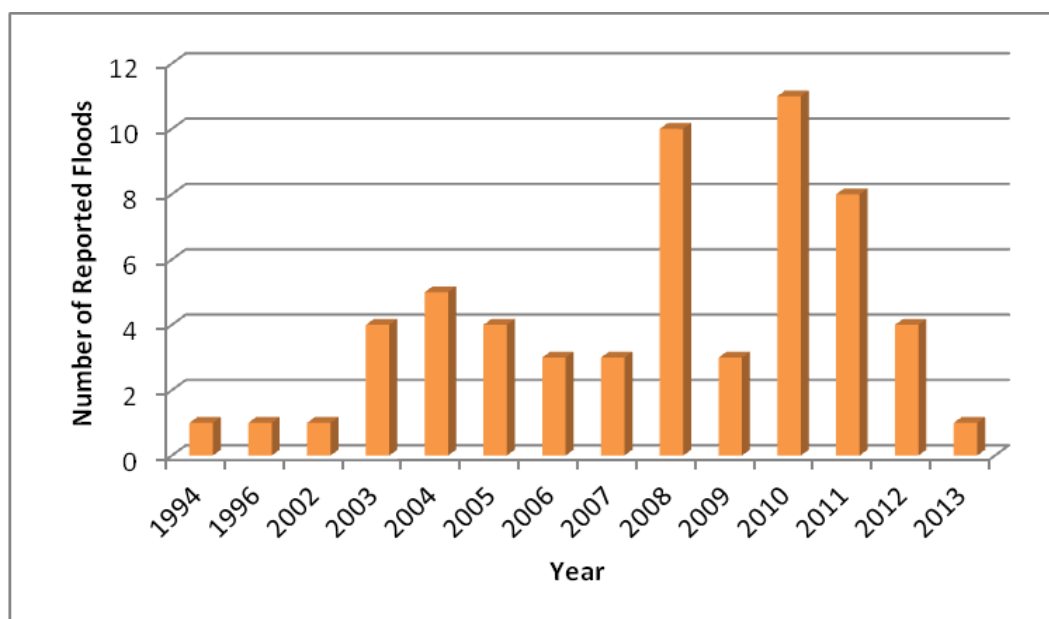
The PRRC also has its community involvement program, the “River Warriors”, which are mainly composed of residents along riverbanks and endorsed by their community leaders (chairmen of their respective *barangays*). In line with the directive to focus on land use and waste management, River

Warriors conduct regular clean-up activities and community education on solid waste management and environmental protection (BusinessWorld, July 2013). Although some news media refer to them as community volunteers, full-time River Warriors receive wages from PRRC (BusinessWorld, July 2013; Tempo, August 2012). Provided by the PRRC with military training, River Warriors function much like environmental police, guarding the cleanliness and the area from informal settlers and potential polluters. Through funding from the ABS-CBN Foundation, *Kapit Bisig Para sa Ilog Pasig* (KBPIP) project was launched to rehabilitate several creeks that feed into the Pasig River.

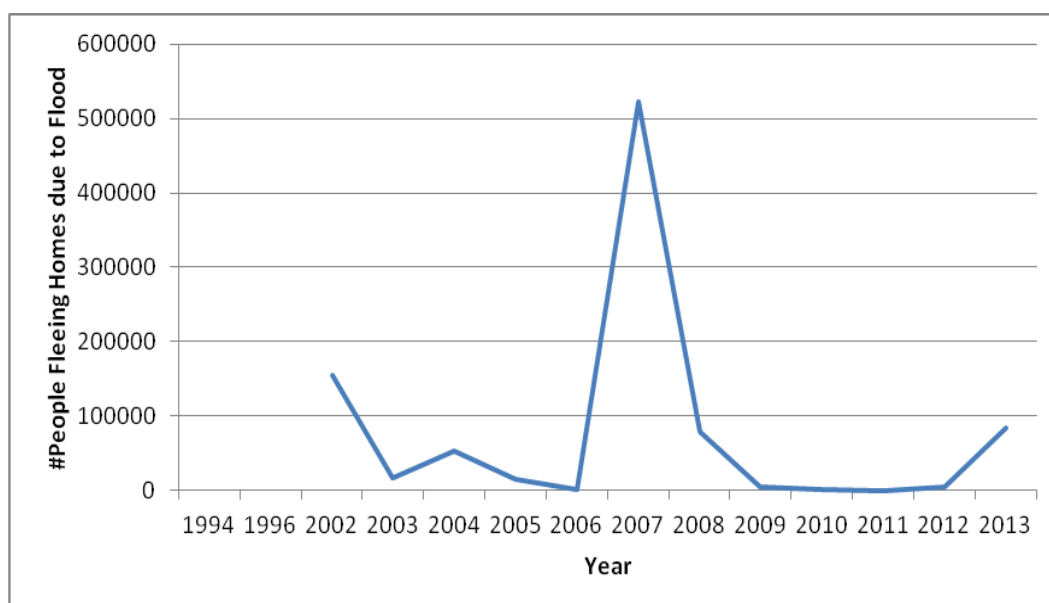
Secondly, Typhoon Ketsana also uncovered the strength of grassroots-based communications in flood disaster governance. Networks of neighbors, friends, and relatives are most dependable sources of financial and emergency support during flood events, but these networks can only be supportive for a limited period of time (Zoleta-Nantes, 2002). Immediately after Ketsana hit, however, potable water was delivered in bottles to many informal settlements of Metro Manila because of the existing integration of the community leader (*kasangga*) and the Manila Water as the water supply operator. These informal leaders are familiar faces in the communities that become points of communication with the operator when there are disturbances to the services. Water services were off due to the floods, but the *kasanggans* found out relatively quickly about the need of potable water in their communities and passed the information through their mobile phone to the water operator, which later delivered emergency water in bottles within 24 hours. The water utility operator admitted that they would not be sufficiently equipped to provide immediate assistance had it not been for the *kasanggans* who become their focal points in the affected communities (Luz and Melosantos, 2009).

Jakarta: The Sinking Ship

Jakarta in general is experiencing land subsidence of 1-15 cm per year, although in a few locations it can be up to about 20-28 cm per year (Abidin et al., 2011). In the meantime, the sea level in Jakarta Bay increases as much as 0.57 cm per year (Hadi et al., 2005). The sinking of the city perpetuates the flooding problem in Jakarta, a city-region with 40% of its territory already below sea level (Steinberg, 2007). The most recent tidal flood in June 2013 inundated Gunung Sahari Street, the main thoroughfare in North Jakarta, up to 50 cm. A heavy rain in the Ciliwung River watershed would quickly result in a flash flood in Jakarta. From 1950 onwards, there had been at least 14 major floods that were recorded in Jakarta, double the number that was recorded in the 300 years that preceded them (Zaenuddin, 2013). To this date, the worse flood recorded in Jakarta had been in 2013, 2007, and 2002, with 2007 flood as the worst in terms of fatalities. The number of deaths reached 80 in Jakarta's greater metropolitan region, from which 48 fatalities were in the capital itself. But in-between these renown major floods, there had been at least 61 flood incidents in various localities in Jakarta from 1994 to 2013, affecting in total more than 312,924 people throughout the years, forcing 180,578 people to flee their homes, and causing 27 deaths (BNPB, 2013).

Figure 8. Number of Reported Floods in Jakarta, 1994-2013

(Data Source: BNPB, 2013)

Figure 9. Number of People Fleeing Homes due to Floods in Jakarta, 1994-2013

(Data Source: BNPB, 2013)

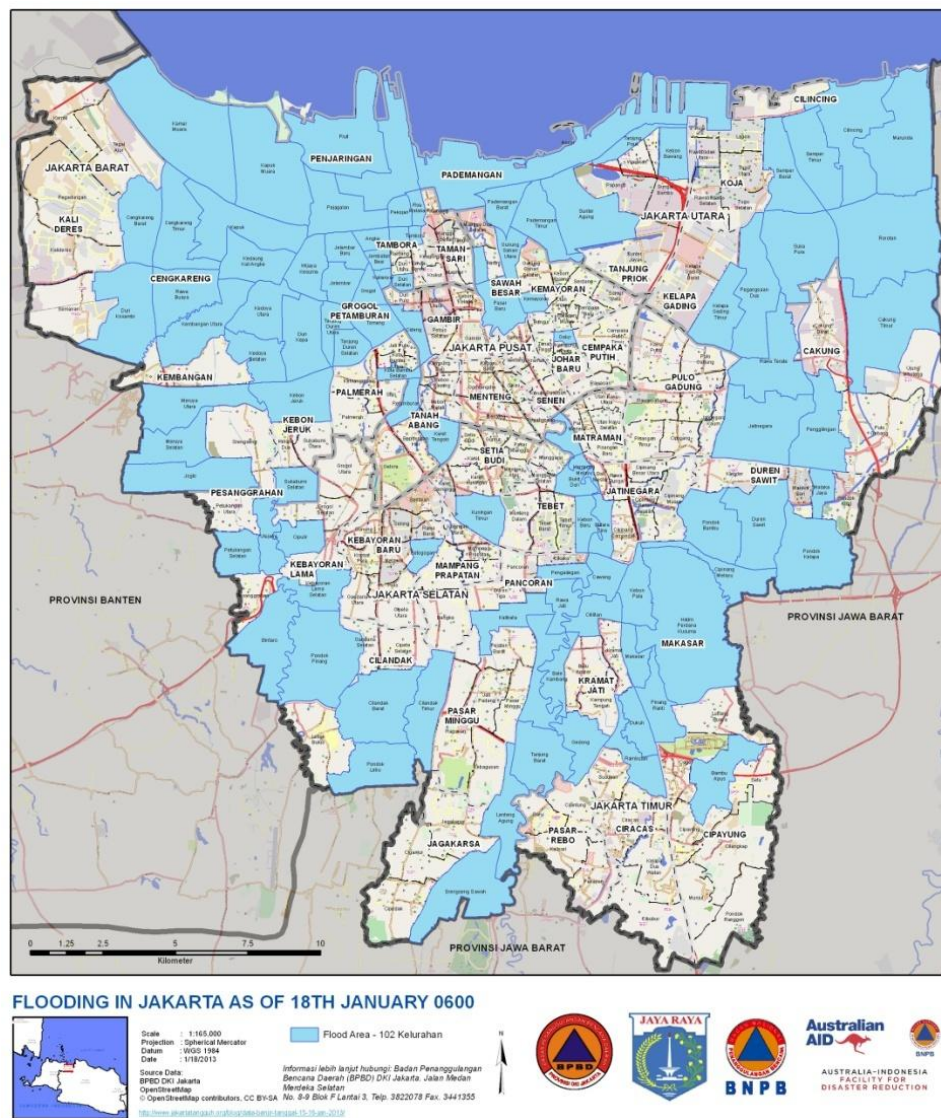
Jakarta's flood problems in general have been blamed on three man-made causes. First is the lack of flood control infrastructure capacity, second is the reduction of capacity of the infrastructure systems, and third is the reduction of rainwater absorption in the watershed area (Steinberg, 2007). Akmalah and Grigg (2011) systematically classified the factors contributing to flood problems in Jakarta as natural, technical, institutional, socio-economic, and financial. Out of the technical, institutional, and socio-economic causes of floods, disaster prevention and mitigation measures in Jakarta still largely focuses on infrastructure capacity and the lack of capability to deal with massive

amount of water (Akmalah & Grigg, 2011; Caljouw, Nas, & Pratiwo, 2004). Unsurprisingly, the solution to flood has always relied on technical approaches to increase the capacity of the infrastructures. Technical solutions to flood in Jakarta that can still be found today date back to the establishment of the colonial city of Batavia – the name of Jakarta during the Dutch colonial period. A canal system resembling the Dutch cities' was built as soon as Batavia was founded in 1619, followed by several other flood control canals. The Western and Eastern Flood Canals were drafted in the 'Van Breen Plan' of 1917, although the latter only started functioning in 2010 (Ward, Pauw, van Buuren, & Marfai, 2013). The 'Van Breen Plan' had gone through modifications in 1965 and 1984, and all the solutions in these plans were technical.

Another commonly acceptable angle to look at flood is the economic loss and the number of victims from the disastrous event. Jakarta's 2007 flood was estimated to cause US\$ 453 million of damages, not including the failed crops in the adjacent provinces of West Java and Banten (Steinberg, 2007). The 2007 flood forced 430,000 people to flee their homes, compared to 300,000 in 2002. Besides the attention towards the socio-economic impacts of floods, recent years have witnessed increasing interest in promoting an 'integrated approach' called Integrated Flood Management (IFM), which emphasizes on community participation and sensitivity to local conditions (Akmalah & Grigg, 2011). IFM emerged from the Integrated Water Resources Management (IWRM) approach that highlights the importance of public consultation and the involvement of concerned parties in the management coordination of water resources such as a river basin (World Meteorological Association, 2009). IFM goals are in line with IWRM's, which aims to "maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (Global Water Partnership, 2000). IFM aims to maximize the efficient use of floodplains and to minimize "loss of life and property" (World Meteorological Organization, 2009: 1).

IFM has recently garnered attention in Jakarta along with the emergence of a new populist governor in 2012. One of the hot issues in Jakarta's gubernatorial election was the flood and the capital was soon hit with a flood that inundated the Presidential Palace and the Governor's office less than three months after the new governor, Joko Widodo, was elected (Figure 10). Media spotlight on floods and flood mitigation measures continued months after. In November 2012, the Water Resources Directorate of the Public Works Ministry announced its cooperation with the Japan International Cooperation Agency (JICA) to manage Ciliwung River watershed for flood prevention (Antara News, 13 November 2012). The 17 billion yen project (approximately US\$ 177 million) is funded by a 30-year loan from JICA that covers the construction costs and consulting services. "The purpose of this project is to protect the central and western parts of DKI Jakarta and the areas along the lower Cisadane River in West Java Province from flooding by construction of a bypass floodway in Bogor from the upper Ciliwung River to the Cisadane River, river bank reinforcement (15km length) on the lower Cisadane River and establishment of a warning system" (JICA Press Release, 2012).

Figure 10. Jakarta Flood Map, 18 January 2013

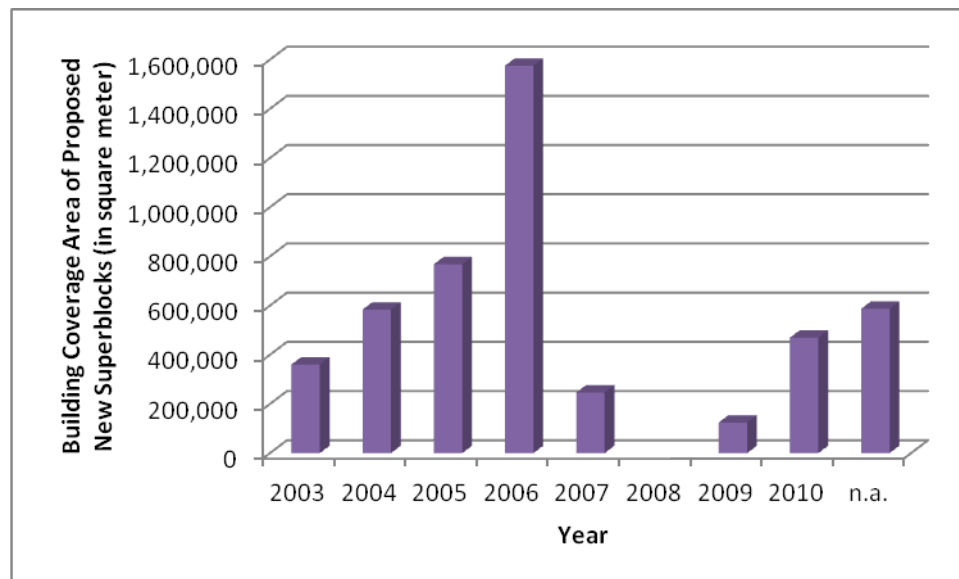


(Source: AusAID)

The bypass floodway in the proposal refers to a 2.15 kilometer deep tunnel with 4-meter diameter that would channel water from Ciliung River in East Jakarta to the Eastern Flood Canal. The project proposal also includes several other alternatives to ease the pressure on the floodway. Most of these alternatives are suggesting constructing additional dams on the upstream of the Ciliung; either it is six small dams (20 meter in height each) or one big dam (40 meter in height). All these measures are proposed in response to the rate of Ciliung watershed urbanization, which has grown from 29.3% in the 1980s to 62.3% in 2008 and is predicted to reach 84.3% in 2030. The most effective element in the proposal, however, is the river improvement. While the diversion tunnel or floodway, the big Ciawi dam, the Ciskabirus dam, and the runoff control are expected to increase the flood control infrastructure capacity by 60 m³/sec, 90 m³/sec, 20 m³/sec and 50 m³/sec respectively, the river improvement is expected to increase the capacity by 500 m³/sec. The river improvement would rehabilitate the existing water gates, through which the capacity of one water gate alone in Manggarai will increase by 180 m³/sec after the improvement. The river improvement also includes the removal of sedimentation and the riverbank settlements. These interventions on

projects that would at least cover a total land area of 13.6 million square meters and building coverage area of more than 4.7 million square meters (Herlambang, 2010). Meanwhile, the agricultural areas in upstream Ciliwung area to Jakarta almost diminished, from 2414 hectares in 1990 down to 72 hectares only in Bogor and Cibinong areas (Zaenuddin, 2013).

Figure 12. Building Coverage Area of Proposed New Superblocks in Jakarta Capital Region, 2003-2010



(Source: Herlambang, 2010)

Groups of residents of riverbank and dam settlements have risen against demolition of their homes in the name of flood mitigation projects. Some of the most vocal groups were from Waduk Pluit, who have staged many protests against eviction and have also gotten attention from the United Nations Special Rapporteur on Adequate Housing. Besides protests, several community activists also attempted to meet with the vice governor, who was de facto leader of the resettlement projects, and to attend public events which would give them opportunities to meet with policy makers. The Waduk Pluit case has garnered attention from academia as well. Faculty members and architecture students from the University of Indonesia and a local architecture consultant have been regularly meeting with several groups of community members in Waduk Pluit and Muara Baru to draft proposals for their resettlement. Groups of students from the University of Michigan and the University of Hong Kong also joined the initiative in early June 2013 to conduct a design workshop together with the residents.

Counter proposals are reflections of community initiatives in Jakarta in the form of project-based flood mitigation. They originated from existing social systems that are in place even before the large flood mitigation projects were announced. Efforts to table a counter proposal to the government are also conducted by a community group in Bukit Duri and Kampung Pulo, the regularly flooded areas on Ciliwung riverbank. After weeks of regular conversations with community members, they came up with a *Kampung Susun* proposal that was presented to the governor in 2012. In these proposals, community groups accepted the fact that they had to be resettled, but they wished to play a role in the resettlement planning and process. Raquel Rolnik, the UN Special Rapporteur who visited the communities, says that she was “so impressed with *kampung* life. This is amazing; the way people cope and organize their lives in such a dense, packed area. How they work and live together in the same space, how much the *kampung* is a living but also a working place and the strength of the

communities to do that” (Tempo, 16 June 2013). Like the *kasangga* system that became very important in emergency water supply in Manila after Typhoon Ketsana, communities in Jakarta have developed ways to adapt and minimize flood disruptions to their daily activities by tapping into their existing social networks and systems.

Figure 13. Weekly Community Forums at Bukit Duri for Kampung Susun Design



(Source: Ciliwung Merdeka, 2012)

These adaptations come in at least three different ways. First is the community-based early warning system and disaster response as described in the field note excerpt in the beginning of this paper. Second is the adjustment of landscapes and architectures. The flood-prone *kampungs* do not install water diversion pumps like what was found in Manila, but houses in Bukit Duri and Kampung Pulo along the Ciliwung River usually have an upper floor to go to when flood water comes. In many housing areas, floods triggered solidarity among neighbors to open their houses as temporary shelters (Zaenuddin, 2013). Meanwhile, there are also examples of community greening efforts on the riverbank to improve the river environment. One can be found at Cawang area, also known as Mat Peci (Masyarakat Peduli Ciliwung / People Care for Ciliwung). Third is the collective effort to influence policies. The counter proposals are examples of reactions against existing government plans. But there are also continuous community efforts to see better waterways in Jakarta. *Komunitas Peduli Ciliwung* (KPC/Ciliwung Care Community), for example, has bases in several points along the Ciliwung River watershed. KPC in Tanjungan offers free weekly garbage tour to pick up trash along a stretch of Ciliwung. Meanwhile, representatives of KPC in Bogor have gone down the whole Ciliwung River to take note of all industries that dump waste directly to the river, although they have not published the list as what has been done by the Sagip Pasig Movement in Metro Manila.

Figure 14. Community Gardening at Mat Peci

(Source: Ministry of Public Works, 2013)

Not all community members, however, are opposed to the Jakarta government's plan on river dredging. During a community meeting in Kampung Pulo, a community leader expressed his eagerness to be relocated. According to another community leader, currently they are flooded at least once a month, from previously once a year. Kampung Pulo is a low-lying peninsula in downstream Ciliwung River. One community leader expressed his weariness in asking his members to do post-flooding community clean-up (*gotong royong* = working together), and he also revealed that often times he had to fork out his own money to provide coffee and snacks for the community members in the *gotong royong* clean-up. Another community leader revealed that the Jakarta administration had communicated their plans of river widening. He also uttered his appreciation on the government proposal, including the visualization of the future Ciliwung that featured concrete banks, green trees, and river transportation.

Figure 15. Flood in Kampung Pulo, August 2013

(Source: Author)

HUMANISTIC PLANNING IN FLOOD DISASTER GOVERNANCE

Floods are assemblages results from an “inseparable and complex mix of human activities [such as rural land management, urban planning]... and nonhuman objects and processes” (Donaldson et al., 2013: 2). Rivers and flood risks are typically framed as hydrological engineering field with complex analyses that require specific trainings. With rivers and their watersheds often stretch beyond city boundaries, local impacts of floods are hierarchically below the general hydrological model of the whole river, as the local impacts are parts of a larger system. Community participation based in neighborhoods may be part of the governance of urban floods, but can rarely be part of the system modeling. “Local knowledge is transferred to a generic model, to make that model work. The model itself is left intact. As a result, it is the models that frame the type of solution that can be tried out, and the framing itself cannot be questioned” (Donaldson, Lane, Ward, & Whatmore, 2013).

In Metro Manila and Jakarta, there were acknowledgements that the floods are made worse by the increasing rate of urbanization and the reduction of water absorption in the watersheds. This is combined with the pollution that comes from the residential, commercial, and industrial functions along the rivers in this urbanization process. In both Metro Manila and Jakarta, records about floods have dated back to hundreds of years; the earliest flood recorded in Jakarta was in the 5th century under the Tarumanagara kingdom (Zaenuddin, 2013). The magnitude and impacts of floods have worsened along with increasing urbanization of land and population in both city-regions.

Despite the urbanization’s impact on floods, both cases of Metro Manila and Jakarta show the concentration of flood mitigation projects on the removal of settlements along the waterways. The approaches in both cities are based on the scenarios which assume that urbanization could possibly continue on the same trend. Moreover, both cities are known as being saturated with superblocks and shopping malls. From 1985 to 2006, there were 24 malls built by the SM group in Metro Manila, offering in total more than 3 million square meters of retail experience. This amount has not included eight more malls that were already planned up to year 2008. Metro Manila also has other groups, Ayala and Robinsons, which are also building shopping malls in the city-region. Robinsons has operated 15 large malls by 2005 and was adding two to three malls per year until 2010 (Rimmer & Dick, 2009).

The experiences in the two cities have policy emphases on the economics and technological knowledge on floods, although the variety of active community involvement is more fragmented from official flood interventions compared to the two humanistic approaches discussed earlier in this paper – the economic-people approach and the knowledge co-production approach. There have not been mentions of differential economic impacts of flood risk management measures in Jakarta and Metro Manila, although there had been much discussion on the economic impacts of floods and the necessary resources to prevent economic loss. In the meantime, the technical solutions as represented by the JEDI and the JICA projects in Jakarta were produced separately from river care activities that are conducted by flood-affected communities. Adolf Heuken, a prominent Jakarta historian, pointed to a lack of a coherent road map for the development of Jakarta that led to discriminatory actions by the administration against many residents (Jakarta Post, 2004). There is abundance of initiatives from civil society and community organizations, spanning from neighborhood activities to local environmental initiatives to political involvements, but much of them are beyond the official flood disaster governance and management programs. As much as these initiatives are both potentially counter-hegemonic as well as perpetuating power hegemony, the fragmentation of the movements is reflective of the urban planning discourse.

The proposed IFM in Jakarta delivers promise that there would be involvement of concerned parties in the form of river basin organization or forum. This refers to the creation of a new forum rather than tapping on existing river communities such as *Komunitas Peduli Ciliwung* or reducing the fragmentation of initiatives. In both Metro Manila and Jakarta there are socially and economically lively communities along the riverbanks that are potentials to be mobilized for relevant flood disaster governance in urban communities. The important contribution of the IFM framework is the fact that there will never be 100% protection against flood in areas that are flood-prone, but the focus on technical solutions can give an illusion of absolute safety from flooding (World Meteorological Association, 2009).

The cases of Jakarta and Metro Manila show different dynamics and appreciation towards people's participation in flood disaster governance and management, but in both cases the foci are in environmental improvement of the rivers, riverbanks, and waterfronts instead of a humanistic paradigm. After the resettlement of Waduk Pluit residents, the Jakarta government celebrated the official opening of Waduk Pluit Park to show the beauty of greenery after the slums were cleared, although the ceremony was also greeted by a handful of residents who staged a protest against resettlement (Kompas, August 2013). Former Manila mayor Atienza also took pride in the rehabilitation of Manila Bay into an organized public open space after slum clearance. Estero de Paco, one of the creeks of the Pasig River in Metro Manila, started the rehabilitation program in 2009 and has – in the words of a resident River Warrior – transformed from a “dirty community” to a clean creek without the unsightly tons of garbage (Singson, 2013; The Philippine Star, September 2012). The removal of settlements becomes a requirement to achieve the necessary environmental and landscape improvement for public good.

Humanistic planning requires continuous philosophical inquiry into what constitutes a human being and how planning facilitates opportunities for the people to live up to her or his capacity. Hence, a humanistic planning perspective necessitates revisiting the assumption that environmental improvements would automatically benefit the people. At the same time, it has not become an empowerment tool for the people to change or challenge the planning structure. In city-regions where inequalities and marginalization are rampant, unreliable policy makers and public service systems as well as the lack of coherence in city developments alter the correlation between environmental improvement and human flourishing. The return of waterfronts as public spaces in the city is not a cure to the fragmented urban institutions and processes, but the physical existence of these reborn spaces as a result of clearing informal settlements become the city administration's evidence of achievements in making the city less prone to flood disasters and less prone to health problems associated with water pollution that would be exacerbated during floods.

The new spaces represent real solutions to flood disasters. They also become assurances that the policy makers dedicate attention towards improving the livelihoods of the urban residents by reducing possible damages from floods. The power of these spaces lies in their physical representations that the current decision making process is capable of producing real results. Hence, the space that is produced through the problematic distinction between natural and social trajectories of urban floods validates the approaches that are adopted as solutions, although the approaches may well be sustaining the same problematic. Traces of community involvement in these spaces such as the River Warriors in Pasig River reflect new constitutions of community groups that are tailored for the projects. On one hand, the processes that result in these new spaces and new community involvement programs are complex, multifaceted, and may not be as dichotomous as prioritizing engineering and planning solutions over social relationships. On the other hand, the processes, the urban spaces and the groups that result from these projects sustain the hegemony of large-scale projects and the assumption that environmental improvements correlates with livelihood improvements.

In line with the historical and geographical context, the two cities would continue to be vulnerable to floods. The environmental improvements of the rivers and waterfronts in Jakarta and Metro Manila proceeded in the midst of still fragmented urban planning discourse, in which top-down actions and large projects seemingly become the best option to have a coordinated intervention. The alienation of existing civil society and community initiatives from official flood disaster governance and management activities is a process of both sensitization and desensitization. It sensitizes new community forums that are formed in conjunction with the projects, such as the River Warriors and the upcoming river basin organization in the Ciliwung case, to prevent unwanted realities such as waste dumping and illegal settlements to choke the rivers. At the same time, it desensitizes communities from taking their own initiatives, as bottom-up programs are limited from having structural impacts. The fatigue of Kampung Pulo residents of experiencing flood and the declining momentum of Kampung Susun design workshops in Bukit Duri are parts of this disempowerment process, in which government interventions in the form of evictions overshadow local initiatives. The detachment of flood disasters from the realm of community and civil society's own initiatives reflects disempowerment, as community-based solutions to disaster prevention and preparedness are subordinated to more sophisticated official approaches.

CONCLUSION

Through the cases of Metro Manila and Jakarta, this paper has shown the separation between humanistic planning perspective and the flood disaster governance and management in these two cities. Urban planning in general has already drifted away from humanistic planning, as shown by the growing urbanization at the expense of the environment and human flourishing. Urbanization has been acknowledged as the cause of flooding and environmental degradation, but the relentless pursuit towards producing economically productive urban spaces has secured the continuity of problematic urbanization trend. Flood mitigation projects are aimed at increasing infrastructure capacities, which in turn affects the marginalized population. The emphasis on infrastructure capacity is also in line with the dominant engineering approach towards flood disaster governance and management.

Flood disaster governance and management in Southeast Asian cities are still distanced from existing locally-based disaster adaptation, mitigation potentials and practices. Community groups and civil society activists continue to take actions to reduce flood impacts; to improve their living conditions, landscapes, and architectures; and to mobilize a counter proposal against the large scale improvement projects. To date, limited impacts by these bottom-up initiatives on the structural approaches to urban flood disaster governance and management is indicative of the unequal power in decision making. The pragmatism of disaster governance and management is a potentially demonstrative tool to exhibit the relevance of humanistic planning approach, but the current hegemony of engineering-dominated approach in urban floods works consistently with the existing power structure that sustains the problematic urbanization. This trend also reveals the limitations of humanistic planning perspective, which has not taken into account the power structure, causes of inequality, and the struggles that come with them.

The detachment of urban flood disaster governance and management from a wider spectrum of community and civil society initiatives would have its limitations. As historically flood-prone cities would not have 100% protection against floods, residents' disengagement from urban rivers and water bodies as something that is beyond their comprehension is a process of desensitization from urban flood disaster preparedness. A city that operates for the human flourishing of its residents necessitates alternative approaches to connect urban landscapes, disaster prevention, and environmental contexts with the development of the residents' consciousness.

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