

Integrated Sustainable Waste Management in Batangas Bay

Lessons learnt from the UWEP Programme in the Philippines



UWEP City Series *Uwep Final Report Volume II*

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ABBREVIATIONS

BBREC	Batangas Bay Region Environmental Multi-Purpose Cooperative
BCRMF	Batangas Coastal Resource Management Foundation, Inc.
BOD	Board of Directors
CAPS	Center for Advanced Philippine Studies
DENR	Department of Environment and Natural Resources
IEC	Information Education and Communication
ISWM	Integrated Sustainable Waste Management
IWB	Itinerant Waste Buyers
JSO	Junkshop Operator
LGU	Local Government Units
MEIP	Metropolitan Environmental Improvement Program
MPDO	Municipal Planning Development Office
MSE	Micro- and Small Enterprises
MSWM	Municipal Solid Waste Management
NGO	Non-Governmental Organisation
PG-ENRO	Provincial Government-Environment and Natural Resource Office
RMP	Recycling Movement of the Philippines
SWM	Solid Waste Management
TIPCO	Trans International Paper Company
UWEP	Urban Waste Expertise Programme

CHAPTER 1 INTRODUCTION

The Urban Waste Expertise Programme, funded by the Dutch Ministry of External Affairs, Division for International Co-operation (DGIS), and implemented by WASTE, Advisers in Urban Environment and Development, lasted from 1996 to 2004, in two sub-programmes, now referred to as “UWEP I” and “UWEP Plus”. UWEP I focused on understanding local processes in waste management and recycling, and then on applying the general lessons learned in four specific intervention cities, called the Pilot Project Settings, or PPS cities. UWEP Plus focused on abstracting from those lessons an integrated approach for Northern and Southern partners to work together on systematic improvement of the urban environment. This approach, called Integrated Sustainable Waste Management (ISWM), now forms the basis for a number of other initiatives, including the ISSUE programme, “Integrated Support for a Sustainable Urban Environment”, which takes Ecological Sanitation as its main subject. In UWEP Plus ISWM was used for integrated waste management assessment and planning in the four PPS cities, and the assessment methodology was crystallised, applied and validated in an additional five cities, for a total of nine UWEP cities world-wide.

The goals of the programme were strongly related to building capacity and generating knowledge, with the goal of supporting Southern stakeholders to mobilise and improve their own urban environment. The initial subjects were solid waste, liquid waste, and sanitation, with solid waste and recycling having the main focus between 1996 and 2004. Over the course of the programme, there were three major activities: research on solid waste and recycling (1995-1998); application of the lessons in four PPS cities (1997-2001); and ISWM assessment and planning in nine UWEP Plus cities (2001-2004). The PPS cities were also the focus of innovative research on the relationship of integrated waste management to cycling of carbon and nitrogen and generation of greenhouse gases.

A very important line throughout the UWEP programme years has been working with local experts, supporting their expanding capabilities and connecting them in networks, as local capacity has a key relationship to knowledge management and sustainability. During UWEP Plus, especially, the regional organisations and local experts co-ordinating ISWM activities became increasingly autonomous and took on ever more directive roles in the decentralised management of the programme. Bearing this in mind, a fourth activity can be described as exploring and implementing horizontal partnerships between North and South in service to participatory urban environmental development.

1.1 The ideas behind the UWEP Programme

The Urban Waste Expertise Programme (UWEP) was formulated in response to a complex of problems that Klundert and Rijnsburger saw in their work in East Africa in SNV, the Dutch voluntary service. These problems included the following:

1. The way that development assistance was done meant that neither the agencies in the Netherlands, nor the local host organisations, had any significant institutional memory or tools;
2. Most knowledge came from the North and was applied in South settings without sufficient attention to the local context, and also, without local consultation with stakeholders;
3. There was an assumption that more, better, or more appropriate technology would solve all of the problems

4. The informal sector and small business were not a focus of the development community, but they were clearly an interesting but highly stressed sector; and
5. There was within development assistance, neither a critique nor an active discourse about these problems and about whether it was important to develop a different way of working.

1.2 Desired results of the UWEP Programme

In a real sense, the UWEP programme was developed most directly in relation to number 5, and constituted a long-running attempt to foster discourse and explore alternative and sustainable modalities of working between committed partners in the North and South. While the formal goals of the programme have to do with improving waste management, there is the most to be seen from the five desired results, quoted here below:

1. “A comprehensive set of appropriate waste related knowledge and experience has been generated and customised for dissemination, both at the practical level of organisations in the South and at the policy level of authorities and development agencies.
2. Local waste handling and waste management expertise has been acquired which responds to the demand for expertise by organisations in the South, and y authorities and development agencies developing community and micro-enterprise-related waste policies.
3. Organisations in the South have gained access through local sources in their respective country or region to appropriate waste-related knowledge and experiences.
4. Responsible governments and donor agencies have been subject to promotion of community and micro-enterprise oriented waste policies.
5. Organisations in the South have received assistance to develop and formulate qualitative proposals for improvement and to channel these through responsible governments and donor agencies.

These five results can be characterised by the short names: (1) appropriate knowledge, (2) local expertise; (3) facilitating Southern access to information and expertise; (4) community and MSE policy focus; and (5) Northern experience in service to Southern goals.

1.3 Methodology in development: the hallmarks of the UWEP Programme

1.3.1 Co-operation with the South

The major methodological focus of the UWEP programme was and has remained on the South: southern stakeholders formulate their needs and agendas, southern researchers and local experts execute programmes; management is shared between Northern specialists (who also mobilise Northern funds) and Southern experts and stakeholders; and there is horizontality and mutual respect in every aspect of the North-South relationship.

1.3.2 Thematic focus on locally relevant aspects of recycling and waste management

The second methodological focus was pursuit of themes which arose inductively from local research, and therefore which have inherent relevance to the local situation. This created a need for Southern involvement in all phases of the programme, from identifying the themes to evaluating the results of the activities. The themes were devised based on needs and activities identified in the field, based on identification and characterisation by the local researchers themselves.

1.3.3 Regional information exchange

The third methodological focus was formulated as regional information exchange, and can be interpreted as having both a substantive and strategic element. The substantive element is to make information from one region available and accessible to those in another region with a similar type of activity and a corresponding general level of technological complexity. This makes the knowledge more directly applicable.

The strategic element focuses on counterbalancing traditional post-colonial dependencies, as a result of which information, energy, transport, and goods and services flow North-South between former colonial masters in the North and former colonies in the South, by creating or strengthening South-South channels of information exchange and empowering regional nodes to take on this function.

1.3.4 Focus on South professionals

The UWEP programme had a strong focus on working with and on behalf of a quite specific target group: local experts. The strong emphasis on local research, involving younger specialists or students, and the commitment to contracting work to young professionals relate strongly to the idea of building knowledge and expertise in the South.

1.3.5 Sharing, co-operating, and facilitating access to information and knowledge

These three aspects of the UWEP approach focus on identifying and filling gaps in a collaborative mode, rather than re-inventing the wheel or competing for economic niches. The strategic edge here is to reduce Southern (and donor) dependency on (high-cost) Northern professionals, in order to be able to use more of the available funds for development goals in the South.

1.3.6 Pushing the boundaries of knowledge and information

In UWEP I, this had mainly to do with “daring” to focus on the activities of the informal sector, and to criticise the activities of the formal political authorities for failing to do so. A second radical element in UWEP I was the idea that communities could have a voice, even a systematic one, in the development of urban infrastructure in their own communities and the city as a whole.

In UWEP Plus, WASTE and its partners took the further radical step of analysing the effects of waste management interventions on the cycling of carbon and nitrogen, a line of work done locally by scientific researchers and at WASTE by the C-N Theme Co-ordinator. UWEP Plus was also innovative in the extent to which the regional programme management partner organisation set their own agendas for activities in their regions.

1.3.7 South focus, ownership and sustainability

The leitmotif of South focus has an important effect on, ownership and sustainability. In reducing dependency on the North and supporting knowledge and knowledge-based nodes in the South, there is a commitment to building continuity that doesn't depend on political fads or international donor funds. The focus on ownership puts both the process and results of the interventions into the hands of key city stakeholders, including but not ever limited to the formal local authorities. This ensures, first, that what happens is relevant and important to the local citizens and businesses, and secondly, that they retain control, so that the exit of the

programme, donor, or external consultant has only a minor impact and the activities continue on their own.

1.4 Overview of The UWEP Programme: Development co-operation and waste management

The UWEP Programme operated for nine years, with a first contract from 1995-2001, and an extension called UWEP Plus running from 2001 through June 2004. The practical focus and activities are shown in Table 1.

Table 1. Overview of activities in UWEP I and UWEP Plus

UWEP Phase	Regions or countries	Activities
UWEP 1-1 Research	Latin America, Asia, W. Africa	Intensive research on local waste management and recycling using young local researchers, complemented by periodic working meetings for the researchers
1-2 Formulation of themes and topics	same	From Gouda, identification of themes such as community participation, linkages, knowledge and expertise-sharing, social sustainability, stakeholder platforms, micro-privatisation, and the like
1-3	parallel to UWEP	Based on the themes, and parallel to the UWEP process, articulation of the concept and framework of Integrated Sustainable Waste Management (ISWM)
1-4 Design of Pilot Project Settings	Central America, Philippines, India, Mali	Working with local organisations, design and implementation of practical pilot projects, and documenting them increasingly using the ISWM framework
1-5	All	Reflection, refining the ISWM concept, and formulation of follow-up activities.
UWEP Plus phase 1	Central America, South America, Philippines, India, Mali, Middle East, Eastern Europe	Engagement of the local authorities for an ISWM Assessment and planning process; mobilisation of stakeholders and execution of a Memorandum of Understanding (MoU)
U+ phase 2	All	engagement of stakeholders in an ISWM assessment and planning process in nine cities
U+ phase 3	Central America, Philippines, India, Mali	additional capitalisation of pilot projects and completion of pilot project cycle
U+ phase 4	Central America, Philippines, India, Mali	Validation of the ISWM approach to planning
U+ phase 5	Research in the regions on C and N cycles	Material balance analyses of the effects of integrated approaches to waste management on the emissions of carbon and nitrogen to atmospheric cycling of these materials and to climate change.
U+ phase 6	All	Increasing importance of the ISWM discourse, together with reflection and discussions on peer relations, partnerships, horizontality and transparency, and the like.
U+ Closing	All	discussions about programme exit, careful exit strategies, explicit (and ceremonial) transfer of project ownership to local stakeholders

1.5 The concept of Integrated Sustainable Waste Management (ISWM)

1.5.1 The dimensions of ISWM

The concept of Integrated Sustainable Waste Management (ISWM) recognises three important dimensions in waste management: (1) the stakeholders involved in waste management, (2) the (practical and technical) elements of the waste system and (3) the sustainability aspects of the local context that should be taken into account when assessing and planning a waste management system.

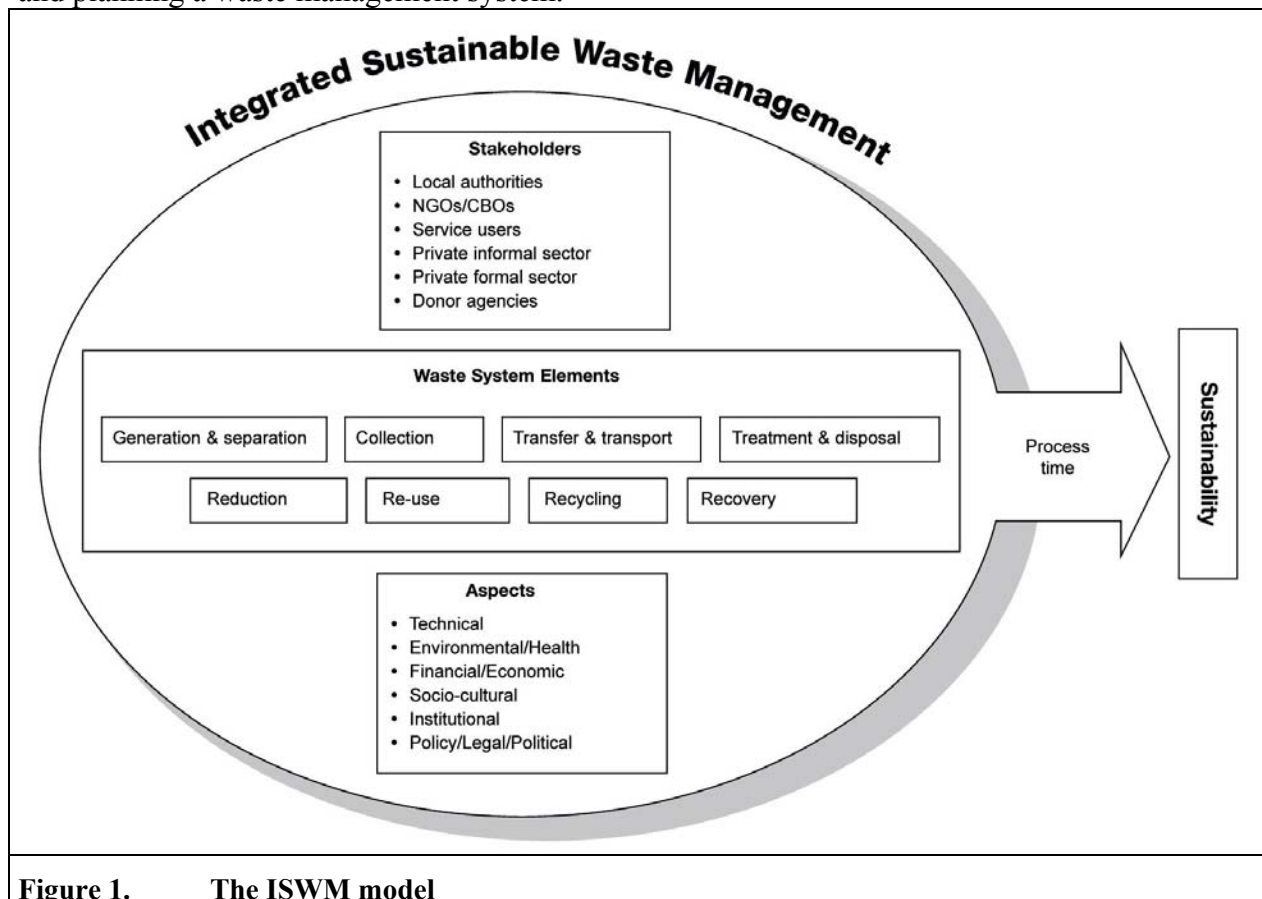


Figure 1. The ISWM model

1.5.2 Stakeholders, the first ISWM dimension

The first ISWM dimension is the **stakeholders**. A stakeholder is person or organisation that has a stake, an interest, in –in this case- waste management. A number of potential stakeholders are listed in below. However, stakeholders in waste management differ in each city, so they need to be identified in the local context. Stakeholders may vary in the intensity or breadth of their roles and interests in relation to waste management, but they can co-operate for a common interest. In addition, the stakeholders in a particular city or region share a common social and geographic context, and may be bound together by other systems in addition to solid waste¹. Some typical stakeholders in ISWM are:

- ◆ local authorities
- ◆ community groups
- ◆ NGOs, CBOs

¹ For example: clan, caste, ethnicity, professional affiliation, religion, school or university background, commercial relationship, kinship, sport.

- ◆ local, regional or national institutions, such as schools, hospitals, trade unions, the military, government departments, national parks; tourism associations
- ◆ recycling industries
- ◆ private waste management companies and their clients
- ◆ social and religious groups
- ◆ activists and lobbyists
- ◆ politicians
- ◆ private sector industry and commerce and the associations or trade industry lobbyists that represent them;
- ◆ small and micro-enterprises and entrepreneurs
- ◆ other self-identified parties and individuals with **a stake** in the urban environment in general, and solid waste in particular.

1.5.3 Waste system elements, the second ISWM dimension

The waste system elements are sometimes referred to as the technical components of waste management. Most waste system elements are also stages in the life cycle of materials. This life cycle movement, or flow, begins with extraction of natural resources, and continues through processing, production and consumption stage towards final treatment and disposal. The waste system elements generally form the “back end” of the life cycle.

ISWM labels the technical side of waste as the basic waste activities:

- ◆ Waste prevention and minimisation
- ◆ Reuse and repair
- ◆ Collection
- ◆ Transfer
- ◆ Street sweeping
- ◆ Recycling, also called materials recovery
- ◆ Composting, also called macro-nutrient cycling or organic materials recovery
- ◆ Energy recovery
- ◆ Safe disposal

Many countries have prioritised these waste management activities into the so-called *waste management hierarchy*, which varies between an operational policy guideline and an injunction that is part of a national environmental law. This waste management hierarchy, shown in Figure 2, is also a cornerstone of the ISWM approach and has been a governing principle in the UWEP programme.

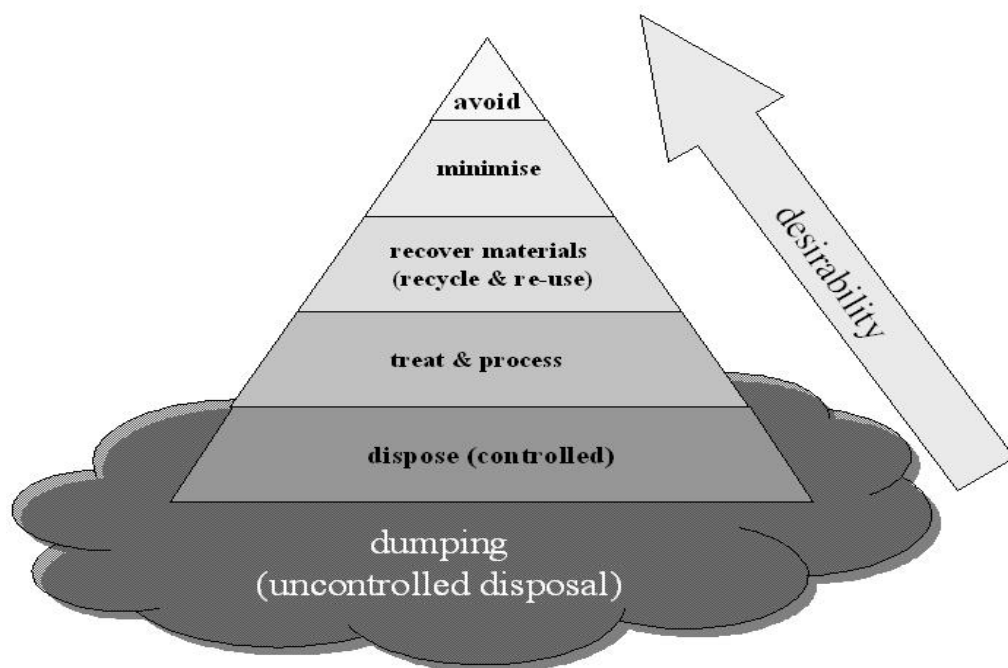


Figure 2. The Waste Management Hierarchy

Source: combined ideas about the hierarchy from Dutch and English-language sources.

1.5.4 The third dimension: Sustainability aspects

Within ISWM the third dimension consists of six sustainability aspects, or lenses, through which the existing waste system can be assessed and with which a new or expanded system can be planned. The sustainability aspects, ranging from political-legal to technical and performance, cover the range of factors influencing solid waste activities and include.

- ◆ The policy or legal aspect;
- ◆ The institutional and organisational aspect;
- ◆ The cultural and social aspect;
- ◆ The financial and economic aspect;
- ◆ The technological and technical aspect; and
- ◆ The environmental aspect.

1.5.5 ISWM as a framework for the UWEP Programme activities

ISWM developed in parallel with the UWEP programme activities, and is in that sense interwoven with their history. The paper where the ISWM concept was articulated for the first time was given at the Ittingen conference in 1997, an event that launched the CWG, a professional information-sharing group of international waste management specialists.

During UWEP I, the pilot projects were designed to capture and apply insights from extensive field work in the regions, but especially in Latin America. There was not, at the time of design, any clear methodological approach, and the ISWM framework was in some sense articulated, based on practical experience, to fill the methodological void, capture the successful approaches tested in the field, and introduce consistency and comparability across cities. ISWM became the main activity and methodological focus of the UWEP Plus phase of the UWEP Programme.

1.6 City case studies

The UWEP programme was active in the four PPS cities: Bamako, Mali; La Ceiba, Honduras; Bangalore, India; and Batangas Bay, Philippines; for a period varying from seven to nine years. It was and remains unusual, in development co-operation, for a Northern organisation to co-operate horizontally with South partners, for such an extended period of time, in the same locations. The kinds of information that emerge from such a long period of intervention can be useful for colleagues both in the North and the South. For this reason, WASTE and its partners have decided to prepare case studies of the four PPS cities, highlighting both process and results.

This is one of four city case studies, documenting the work of the Urban Waste Expertise Programme in Mali, Honduras, India, and the Philippines. This work focused on bottom-up solid waste management and development in four communities, and was based on, and contributed to, the concept of Integrated Sustainable Waste Management (ISWM).

The purpose of these case studies is:

1. to document the activities of the UWEP programme and the results achieved in the cities;
2. to capture the institutional memory of the UWEP programme and make it available to future initiatives that build on these results;
3. to make data and information available to the city itself;
4. to enrich the methodological information on integrated sustainable waste management (ISWM).

The case studies are designed to be read by:

- ◆ present and incoming staff of the local authority and provincial, regional, and national government representatives;
- ◆ consultants working on urban services, recycling, or waste management;
- ◆ representatives or staff of other local stakeholders including community groups, NGOs, and the private sector;
- ◆ entrepreneurs wishing to expand or strengthen their solid waste portfolios;
- ◆ academicians and scholars in urban environmental management;
- ◆ the press, especially when seeking background materials;
- ◆ donors interested in supporting future waste management activities;
- ◆ local experts interested in using or replicating the results;
- ◆ other interested parties.

Each of the four case studies focuses on one of the so-called “Pilot Project Setting” cities. These four cities differ widely in climate, character, socio-economic circumstances, and on many different parameters.

The four PPS cities were selected in UWEP I in the period 1996-1998, based on opportunism, serendipity, and a rather loose application of certain criteria, including:

- ◆ a demonstrated interest in improved solid waste management;
- ◆ a commitment to bottom-up processes;
- ◆ willingness to host one or more pilot projects, and ideas about focus for it/them;
- ◆ involvement of a regional programme co-ordination organisation and a local pilot project co-ordinator; and

- ◆ presence of a local NGO or local expert counterpart (with the exception of La Ceiba, where such a counterpart was created by the UWEP programme partners);

CHAPTER 2 THE PROCESS OF IMPLEMENTING UWEP

2.1 Case Study: Batangas Bay region, The Philippines

This case study centers on Batangas Bay Region (BBR), the Philippines, which will be the focus of the remaining chapters. The BBR was chosen as a Pilot Project Setting for UWEP because the opportunities for urban environmental management were enormous at both the macro and micro level. Batangas Bay is a rapidly urbanising industrial port area and the focus of a marine- and land-based pollution prevention programme by the IMO with funds coming from the UNDP-GEF. The UWEP's bias for community level ISWM activities was seen to integrate very well with the region-wide programme of the IMO. As such, the original concept for the UWEP pilot projects centred on enhancing the role of small and micro-enterprises (SME) and local stakeholders' participation in ISWM activities.

The featured case study, BBREC, discusses how UWEP programme staff facilitated the process of 18 junkshop operators (JSOs), previously accustomed to operating individually; competing against; and distrusting each other, to form a cooperative. UWEP's organizing work involved countless meetings and confidence-building workshops and seminars to formalized the Batangas Bay Region Environmental Multipurpose Cooperative (BBREC). Tapping the endorsement and promotional assistance of the local governments at the provincial and city levels, UWEP project staff were able to help BBREC open its doors as a business, and support it in its daily mission to collect recyclables from non-traditional sources and commercial generators such as banks, commercial and service establishments, and industries located in the BBR. Through BBREC, used paper and carton, which are normally burned or disposed in dumpsites, are now collected and sold to paper mills in the BBR. Bottles, e.g., softdrink, gin and catsup, aluminium, many types of plastics, and broken glass are also systematically collected and sold directly to recyclers under reasonable conditions and for better prices than before. BBREC is now a sustainable and viable enterprise able to turn waste into an economic resource and increase tremendously the income of its members.

The case study also deals with the interventions of UWEP in Tingloy, an relatively poor and isolated island municipality of about 20,000 inhabitants. Before UWEP, Tingloy had no solid waste management (SWM) system, as evidenced by the lack of a municipal budget for SWM. Solid wastes ended up along the coast, in rivers, mangroves and other open areas. Hearing about UWEP for the first time in 1996, a few well-meaning municipal officers requested the UWEP coordinators and managers to implement SWM pilot project in their area. This case study will explain how the ISWM framework and various intervention instruments, like research, study tours, memorandum of understanding, (MOU), and capacity building activities were put to work to effect attitudinal, behavioural, legal and institutional changes in the island.

2.2 Introduction to the Batangas case study

2.2.1 How was contact with UWEP initiated?

The Batangas Province is one of the 73 provinces in the Philippines. It is located south of Metro Manila and approximately 112 km. away. It has a total land area of 3,166 square kilometres. Batangas Bay is a semi-enclosed body of water, bordered by the mainland

municipalities of Bauan, San Pascual, and Mabini. It also includes Batangas city, Verde Island and the municipality of Tingloy on Maricaban Island. Its total water area is about 220 square km. and the total coastline is 470 km. The five municipalities in the Batangas Bay Region -Batangas City, San Pascual, Bauan, Mabini and Tingloy- have a total population of around 410,000 people (2003).

Including the island municipality of Tingloy, the land forms in Batangas Bay Region, as a whole, consist predominantly of terraced residual slopes and volcanic hills, comprising about 43 percent and 21 percent, respectively, of the total land area. Coastal municipalities have broader alluvial plains, in total 4,033 hectares, which are suitable for agriculture and/or urban development; in contrast, the interior municipalities only have 1,135 cultivable hectares.

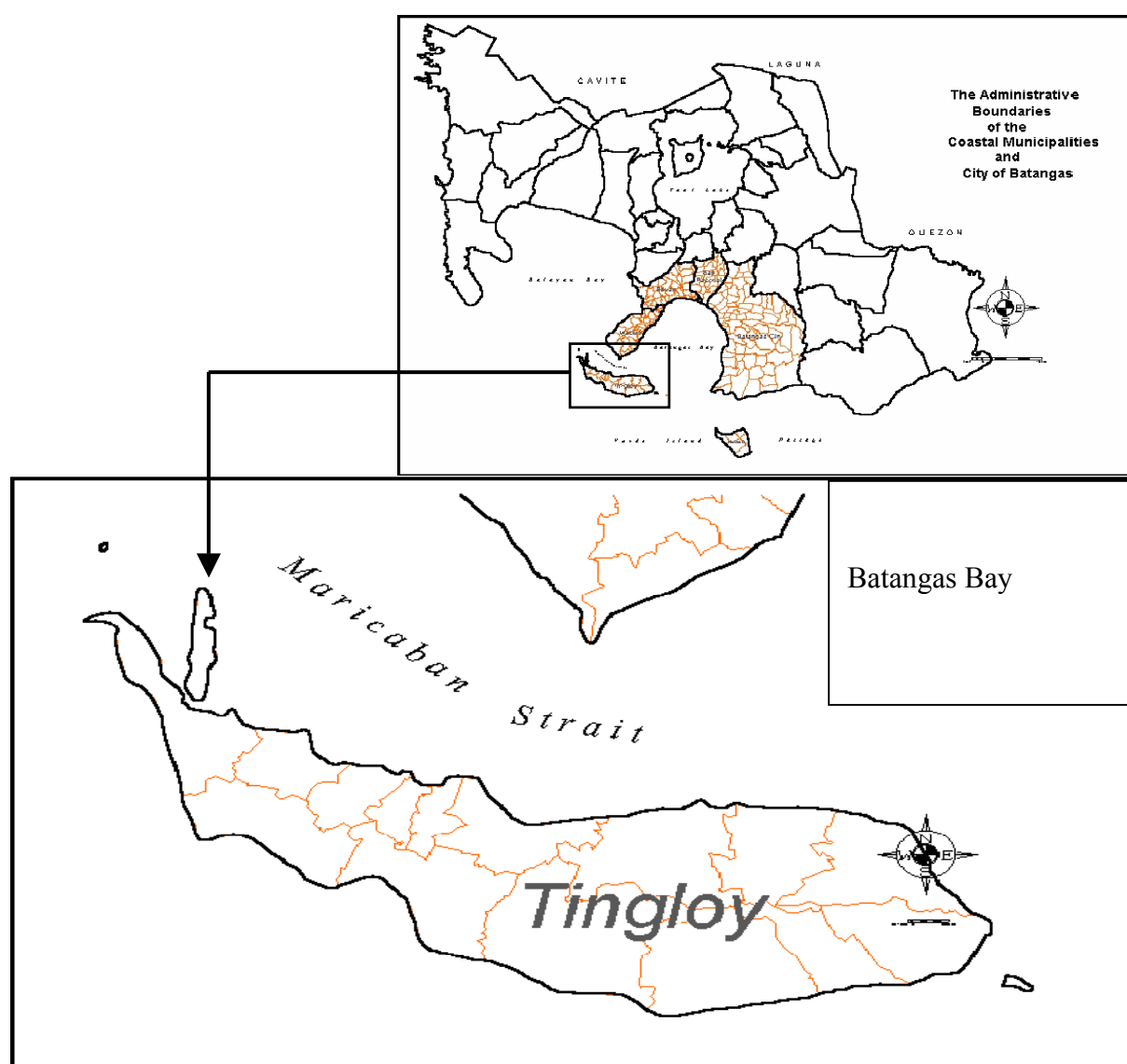


Figure 3. Map of Batangas Bay area

CAPS, based in Manila, had worked with WASTE in the WAREN (Waste Recycling Nairobi) project (1990-1995). This had demonstrated the potential for groundwork in waste management, which was later supported by a 'Local Initiatives Study'. The Batangas Bay

Region was identified as an intervention area by WASTE and CAPS because of its inclusion in the programme of the UNDP/International Maritime Organisation on pollution prevention in East Asian seas. Possibilities for cooperation were explored. Then several meetings with the different stakeholders in Batangas Bay Region regarding SWM problems were held. It was during these meetings that representatives from Tingloy became very interested in the project, and made a strong request for technical support to solve their solid waste problems. The Provincial Government-Environment and Natural Resources Office (PG-ENRO) assisted CAPS in hosting these consultation meetings.

2.2.2 What motivated the partners and stakeholders to ask for UWEP support?

The partners and stakeholders were looking for ways to improve solid waste management. UWEP was perceived as a programme that could assist them with technical support and funding.

2.2.3 Who were the key owners of the process?

CAPS and WASTE initiated the activities of UWEP in the Batangas Bay region. CAPS facilitated through its regional programme manager and local coordinators the entire implementation of the programme. Care was taken that they did not ‘own’ the programme, or its results. Responsibilities in design, preparation and implementation were given as much as possible to local organisations. During implementation the programme provided mainly advice.

The following are the key stakeholders in the UWEP Programme, both in the implementation of UWEP I and UWEP Plus. Without the key stakeholders, nothing would have happened and everything would have collapsed after the end of the programme.

Key stakeholders in UWEP I:

- ◆ the local authority, or municipality, of Bauan City
- ◆ barangay committees in Bauan city, especially in Barangay San Miguel
- ◆ three barangays of the municipality in Tingloy
- ◆ PKK, the stakeholder platform for Tingloy
- ◆ Junkshop owners and recycling dealers
- ◆ the recycling cooperative created during UWEP (BBREC)
- ◆ the International Maritime Organisation

While the activities of the IMO were a big motivator for choosing Batangas as an intervention region, IMO was never in practice an operational or real stakeholder during the UWEP programme.

During UWEP I, there were some key activities in Bauan city, but in 1999, Barangay San Miguel chose to drop out of UWEP when it became clear that there was no large investment fund. In the case of Tingloy, the primary stakeholder during UWEP I was the PKK, while in UWEP+ the primary stakeholder became the municipality because of the passage of the Law on Solid Waste Management of 2000 (RA9003) which gave local governments a prominent role and important responsibility in waste management. Because of its focus on integrated planning, in UWEP plus, the focus moved from only the three ‘poblacion’ (densely populated, urbanised) barangays, to a focus on the entire municipality of Tingloy. Regarding main stakeholders in BBREC, there were no differences between UWEP I and UWEP Plus.

Besides this, the pilot projects of UWEP I were implemented by a local non-government organisation named Batangas Social Development Foundation (BSDF). They were the lead organisation in community mobilisation efforts.

Key stakeholders in UWEP Plus have been:

- ◆ Municipality and 15 barangays in Tingloy;
- ◆ Municipal SWM Board of Tingloy;
- ◆ Families in Tingloy who have received EcoSan toilets;
- ◆ SWM Committees at barangay level;
- ◆ Junkshop owners, dealers and BBREC;

In UWEP Plus the organisation PCWS-ITNF (Philippines Centre for Water and Sanitation-International Training Network Foundation) implemented the ecological sanitation pilot project in Tingloy.

2.3 Overview of the UWEP interventions in Batangas, 1995-2003

2.3.1 UWEP I

The structure of the UWEP I programme in the Philippines was centred around a Regional coordinator (Dan Lapid) and a local coordinator (Mel Palmares) from CAPS. A local non-governmental organisation named the Batangas Social Development Foundation (BSDF) provided three project coordinators.

The division of tasks and responsibilities during UWEP I was as follows:

The Regional coordinator was responsible for coordinating and conducting researches and developing the UWEP information network in the region. The Local coordinator supervised the implementation of the pilot projects in the Batangas Bay Area. The project coordinators facilitated the activities at the community level. The Local coordinator was supervised by the PPS (Pilot Project Setting) manager at WASTE, Lex Hemelaar. All activities were screened by him.

The case of the Philippines was unique in that, after the departure of the PPS manager from WASTE, this task was shifted to the Regional co-ordinator. This can actually be seen as a first step towards more shifting of responsibility to the countries in the South where UWEP was implemented, a step that was taken further during UWEP Plus.

The main actors during UWEP I were:

- ◆ Municipality and 3 barangays in Tingloy
- ◆ PKK, the newly created stakeholder platform for waste management in Tingloy
- ◆ Junkshop owners and BBREC
- ◆ CAPS
- ◆ Batangas Social Development Foundation
- ◆ Provincial Government-Environment and Natural Resources Office (PG-ENRO)

2.3.2 Activities under UWEP I

Under UWEP I a number of activities took place that are described below. The main types of activities were:

- ◆ Research
- ◆ Pilot projects
- ◆ Capacity building

MoU between UWEP and IMO

After initial reconnaissance mission by the PPS manager for the Philippines from WASTE in 1996, UWEP I began. From the outset the programme sought to link up activities with the Regional Program for the Prevention and Management of Marine Pollution in the East Asian Seas of IMO/UNDP/GEF. The PG-ENRO (Provincial Government – Environment and Natural Resources Office) implemented this programme. A Memorandum of Understanding (MoU) was signed with this programme, but this led to only limited cooperation in the implementation of the UWEP programme, because the IMO had a macro or large-scale approach towards pollution control over the whole Batangas Bay area, and solid waste was only one small component of their programme. They also put more emphasis on waste disposal, while UWEP concentrated more on waste minimisation and reuse. In addition, UWEP was more focused on the micro-level ISWM in terms of community participation and integration of SWM elements and aspects, recycling, waste reduction, etc.

Stakeholder Workshop

The activities of UWEP in the Batangas Bay region commenced officially in 1997 with the conducting of a **Stakeholder Workshop** targeted to relevant stakeholders involved in the waste management sector active in the Batangas Bay region, such as local governments, junkshop owners, NGOs, churches, schools, commercial and industrial companies. This workshop provided an opportunity for the organisations to become familiar with UWEP's approach as well as the opportunity for the UWEP programme management to acquire knowledge about the role and activities of the various stakeholders in the waste management sector.

Inventory of Local Initiatives on Waste Management

During this workshop UWEP programme staff decided to carry out **a study of ongoing local initiatives** (community-based initiatives or micro-enterprise activities in waste collection or recycling) in the waste management sector in the Batangas Bay region. This study, entitled "Inventory of Local Initiatives on Waste Management," was prepared by three local researchers. The authors contacted, inventoried, and documented existing community-based CBO and NGO initiatives in low-income areas carried out by efforts () in waste management as well as identifying MSEs involved in waste collection and recycling, especially junkshops (JSOs) and waste buyers, in the five municipal study areas.

Workshop on the Validation of Local Waste Management Initiatives

A Workshop on the Validation of Local Waste Management Initiatives was held in October, 1997 at the PG-ENRO offices, attended by a large number of key stakeholders in informal waste management from the government sector, provincial government, municipalities, JSOs, CBOs, NGOs. All of the principal UWEP partners (then co-operating) were actively involved in the workshop preparations and implementation: PG-ENRO, CAPS, and the IMO. The workshop's objectives were to present and validate the study's findings on ongoing local initiatives in waste management, identify potential projects in waste management and identify

contact groups at the various municipalities as well as what could be their contribution to a waste management program. During this workshop, the stakeholders identified the municipalities of Bauan and Tingloy as the two principal pilot project areas where the concept of ISWM would improve waste management on the basis of the collaborative efforts of all participating stakeholders. This was an important step for establishing UWEP as a response to local demand, and a key factor in creating ownership and rooting the initiative locally.

Problem identification and formulation of pilot project proposals

Subsequent to this workshop, the UWEP Local Coordinator, with assistance from the PG-ENRO office, conducted consultations and local workshops with the municipal and barangay officials, NGOs and CBOs in the two project areas of Bauan and Tingloy. Courtesy calls were made to the municipal local chief executives, followed by consultation workshops on situational analysis of waste management, actions that needed to be taken and available resources.

This resulted in the formulation of pilot project proposals, which were discussed and accepted by the various stakeholders in the Batangas Bay area. Project objectives, roles and responsibilities were validated and confirmed with the various stakeholders. In the course of implementation, the pilot project activities were further developed by the target group. In this too, it was the stakeholders who took the lead in identifying priorities and setting interventions.

Research and knowledge generation

Research undertaken in the Philippines as part of UWEP I involved among others a study on separation at source by Danilo Lapid, Ligaya Munez and Ferdinand Deriquito (Lapid et al., 1998). The results of this study were included in the UWEP publication 'Source separation of household waste materials' by Lardinois & Furedy, 1999, compiling experiences from six countries.

In 1998 a social survey was conducted in barangay 13, 14 and 15 of Tingloy city to assess the perceived level of existing SWM services and the interest of residents in particular options for SWM improvement. Also their willingness and ability to pay for an improved waste collection and disposal system were studied (Marchand, 1998).

Other research undertaken as part of UWEP I concerned the following subjects and subsequent publications:

- ◆ Composting in the Philippines (CAPS, 1998).
- ◆ Hospital waste management in the Philippines (Soncuya et al., 1998)
- ◆ Community participation in urban solid waste management in Metro Manila and Metro Cebu, the Philippines (Lapid et al., 1998)

Capacity building

A solid waste workshop (based on what later became known as ISWM) focusing on knowledge and awareness was organised in July 1998 to evaluate the perception of stakeholders and analysis of system elements: separation at source, collection, recycling and disposal. Participants in this workshop were teachers, barangay captains and council members, local government department heads, vice mayor, police, women's cooperatives, church representatives, and junk buyers. It was conducted by the Recycling Movement of the Philippines, a national NGO.

Workshops for teachers were held in subjects of Ecological Waste Management and project design in August 1998.

In September 2000 a workshop of the Collaborative Working Group on solid waste management took place in Manila, Philippines. UWEP pilot projects were presented during this event.

2.3.3 Pilot projects under UWEP I

Four pilot projects were formulated in the Batangas Bay Region. They were implemented in the period 1998 to 2000. The projects were about:

1. Establishment of a local waste management coordinating body in the municipality of Bauan
2. Development of a community-based waste management system under a community-private partnership in San Miguel ward of Bauan municipality
3. Enhancement of the resource recovery and recycling sector in the Batangas Bay project area covering the five municipalities (the recycling cooperative BBREC)
4. Integrated Sustainable Waste Management in the urban area of Tingloy island municipality

Table 2. Details of pilot projects in Batangas Bay in UWEP I

	Pilot project	Objectives	Duration
1	Establishment of a local waste management coordinating body in the municipality of Bauan	- To inform, consult and discuss with the target group members and form an alliance between the stakeholders who will play a key role in the municipal waste management system	July 1998 – December 1998
2	Development of a community-based waste management system under a community-private partnership in San Miguel ward of Bauan municipality	- To establish a community-based waste management system including the development of a redemption centre under a community-private partnership. - The pilot project should result in a model, which can be replicated on a larger scale within and outside the municipality of Bauan.	July 1998 – June 1999
3	Enhancement of the resource recovery and recycling sector in the Batangas Bay project area covering the five municipalities (BBREC, a recycling co-operative)	- To improve the resource recovery and recycling sector in the project area which in turn will result in higher income and employment via formation of a cooperative of junkshop owners (JSOs) which will advance their interests by recognizing JSOs as partners in SWM and give them opportunities to deal with industries, public and private offices in handling solid waste disposal - Collection of more than one type of recyclables	June 1998 – June 2000

	Pilot project	Objectives	Duration
4	Integrated Sustainable Waste Management in the urban area of Tingloy island municipality	<ul style="list-style-type: none"> - the establishment of a waste management coordinating body in which representatives from the municipality, the barangays, the junk shops and the community participate; - the development of a solid waste management system including options for separation at source, composting at the household level, waste collection and environmentally sound treatment and disposal; - the development of a redemption centre for the recyclables collected from the three participating barangays; - the construction of environmentally sound public toilets with the use of existing materials to prevent pollution from human waste, and - the strengthening of the interest of the local residents of the three barangays (13, 14 and 15) concerning the importance of waste management in maintaining good health conditions. 	July 1998 – December 2000

Implementation of the pilot projects was facilitated by the Batangas Social Development Foundation that was the lead organisation in community mobilisation efforts. Three of their staff worked as project coordinators in UWEP I.

PP3, the pilot project related to setting up the BBREC cooperative of junkshop operators, is described in detail in Chapter 3.

State of the pilot projects at the close of UWEP I

At the close of UWEP I the state of the activities in the pilot project locations in the Batangas Bay region was as follows:

PP1: A local waste management coordinating body has been established in Bauan. There was a request for expansion to 12 municipalities in the Batangas region, but this could not be accomplished because of the close of UWEP I.

PP2: The barangay of San Miguel ceased collaboration in the development of a community-based waste management system once it became clear that UWEP I did not have a provision to provide full funding for the capital investment of the redemption centre construction.

PP3: Enhancement of Resource Recovery and Recycling Sector in the Batangas Bay region (BBREC cooperative). This pilot project can be considered very successful. BBREC is the first provincial cooperative engaged in resource recovery from waste. A steady increase in paper trading and collection as well as the acquisition of a truck for collection contributed to the cooperative's financial viability. At UWEP I project completion in June 2000, the trading business of the cooperative was doing quite well and financial sustainability almost assured. There were plans to expand the number of members and type of materials.

PP4: Integrated Sustainable Waste Management in three barangays of Tingloy:

- ◆ 320 households participate in community-based waste management system. They attended barangay assemblies and focus group discussions, provided information during researches, they regularly pay fees for waste collection, and participate in clean-ups;
- ◆ A committee for Waste Management (PKK) at Tingloy municipal level is established, which collects monthly fees for operation and maintenance of the waste collection system and carries out financial management and monitoring of the SWM system;
- ◆ The municipality is fully supportive of the project, as was shown by the creation of a separate municipal budget for SWM;
- ◆ Functioning redemption centre and controlled dumping site in place.

2.4 UWEP Plus

With UWEP Plus the regional coordinator (Dan Lapid) became regional programme manager. The local coordinator left after UWEP I, to take another position, but two pilot project coordinators were retained as ISWM city coordinators for UWEP Plus, one working primarily in Tingloy, and the other primarily with the private recycling sector co-operative, BBREC, in Bauan.

Important actors during UWEP Plus were:

- ◆ Municipality and 15 barangays in Tingloy
- ◆ Municipal SWM Board of Tingloy
- ◆ SWM Committees at barangay level
- ◆ Junk buyers, dealers and BBREC
- ◆ PKK
- ◆ CAPS
- ◆ PCWS-ITNF

2.4.1 Activities under UWEP Plus

Stakeholder analysis/assessment and mobilisation

CAPS staff and Tingloy municipal officials performed the stakeholder analysis and assessment part of the ISWM process in early 2002. This resulted among other in a diagramme showing the relationships of the stakeholders see Figure 4.

Republic Act 9003, the national SWM law for Philippines, was promulgated in 2000. It required municipalities to establish a SWM Board and barangays to form SWM Committees. Of course this greatly helped UWEP Plus to encourage Tingloy municipality and barangays to set up this board and committees.

A municipal SWM board was established in Tingloy in Q2 2002 through an Executive Order. Along side this, a Municipal Ordinance was proposed, which stipulated a annual budget of P125,000.00 for SWM. By 2003, this was increased to P175,000.00, and The SWM Board received a regular annual budget of P50,000. Also in the spring-summer of 2002, Solid Waste Management Committees were established in all 15 barangays of Tingloy municipality and the UWEP intervention poblacion barangays 13, 14 and 15 issued a joint resolution that fixed a monthly subsidy for waste collection. This is a good example of how political developments, in this case the passage of Republic Act 9003, accelerated developments at the

local level, which were also “ripe” for further activity based on participation in the UWEP programme.

The Provincial Search Committee for the Annual Presidential Award on Environment commended Tingloy municipality, because they were the only municipality in the whole Batangas Province having a resolution forming the municipal SWM board (Q2 2002).

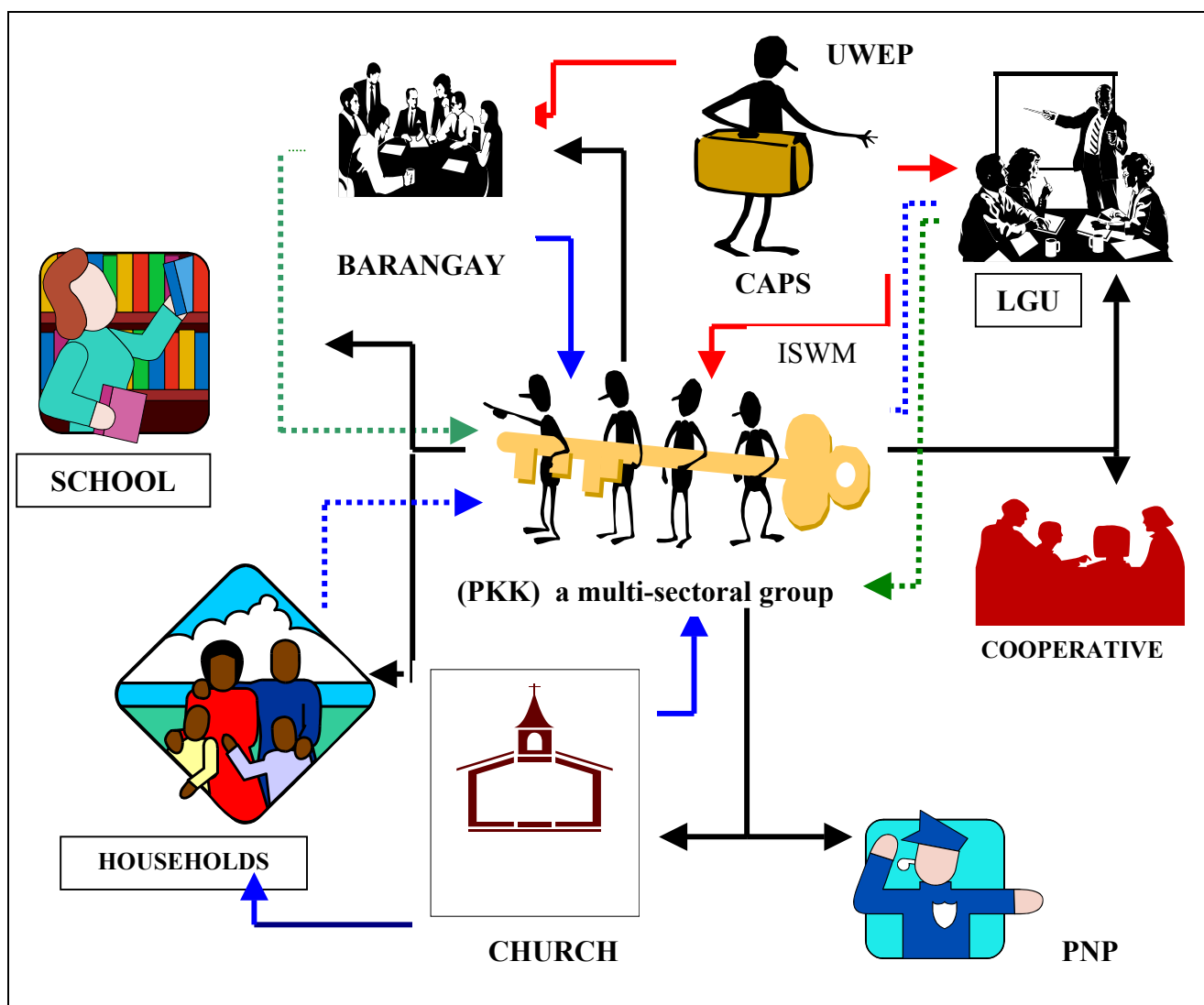


Figure 4. Relationship of the stakeholders

Image created by the PKK

In the fall of 2002, the municipal SWM board established a Technical Working Group (TWG) and four committees to do all the intellectual and practical development work for the SWM board. The TWG has a minimum of 16 members and distributed among the four committees. The four committees are:

- ◆ Enforcement
- ◆ Monitoring and Evaluation
- ◆ Ways and Means
- ◆ Information and Education

ISWM assessment and planning

ISWM Assessment:

The ISWM Assessment for Tingloy was co-ordinated and facilitated by the ISWM city coordinator working in Tingloy, Mining Manguiat. He utilised the services of the Barangay Health Workers to do the household survey and data gathering.

A 2-day workshop for Technical Working Group and the mayor of Tingloy was held on strategic planning in August 2002. During this workshop the first basis was laid for the development of a 10-year ISWM plan for Tingloy. Following the workshop, four committees were formed that each developed a 10-year plan. committee members were representatives of the different sectors in the community, e.g. youth, church, junk buyers, school, local officials and the police. The Enforcement committee submitted its plan in Q4 2002, while the Monitoring and Evaluation committee and the Ways and Means committee completed it in Q1 2003. Only the Information and Education committee did not manage to complete it for several months, till it was dissolved and reconstituted in Q2 2003. It submitted its 10-year plan in Q3 2003. Aside from the committee members, the SWM Board and UWEP+ coordinators were involved in the development of the Plan.

ISWM planning became rather low-profile during the local (barangay) elections held in July 2002. Later on the opposition delayed the approval of the budget for 2003 and thus almost all municipal activities came to a standstill. ISWM planning was also put on hold.

In 2002 an awareness campaign and competition was organised in Tingloy around the issue of stimulating and socialising the idea of long-term ISWM planning. The local government also made a commitment to take responsibility for financing of the execution of the ISWM plans of the municipality and the barangays. The specific strategy of the campaign was to get the barangays to compete with each other, and to designate as the winner the barangay that manages its waste in the most ecologically sound manner. Criteria used were:

- ◆ Formation of an ISWM committee at barangay level
- ◆ Preparation of an ISWM plan for the barangay
- ◆ Implementation of the ISWM plan

Three winners were selected in December 2002. They received cash prizes, jointly financed by the municipal and provincial government and the UWEP Plus programme. All barangays formed a SWM committee. Some developed an ISWM plan, while others listed their ISWM targets, such as: passage of a SWM ordinance; fabrication of public waste bins; implementation of clean-up activities; and the like. The campaign certainly achieved its goals of socialising the idea and practice of planning for waste management.

Capacity building

A number of workshops and training events were organised as part of UWEP Plus. The most important ones are:

Capacity building for local authorities in Tingloy and Batangas Bay region in general:

- ◆ 2-day seminar on strategic planning for the Technical Working Group of the SWM Board in Tingloy in Q3 2002
- ◆ Capacity building on ecological sanitation by Gert de Bruijne from WASTE in Q4 2002

- ◆ One major and seven barangay-level workshops on the new law RA 9003 (January-June 2002)
- ◆ A local study tour (Sept 2002)

Capacity building BBREC

- ◆ Training on leadership and financial management for the Board of Directors of BBREC in Q3 2002

A study tour to Dhaka Bangladesh to visit a decentralised composting project was planned, but later cancelled because of lack of funds and time constraints.

C-N research

Research in to the carbon and nitrogen cycles formed part of the UWEP Plus programme. The University of the Philippines (Environmental Engineering Programme) conducted the C-N research in the Philippines. The research location was Tingloy municipality. The idea was to show that Integrated Sustainable Waste Management can contribute to achieve a reduction in greenhouse gas emissions.

In contrast to the other C-N research locations, the Philippine research team used the EPA *Warmer* framework for the C cycle research, rather than the the IPCC model, and this gave some additional level of detail and interesting insights. More important was that the Philippine N researchers went into more detail and developed a more complete methodological approach for understanding the cycling of Nitrogen in Batangas..

Pilot projects under UWEP Plus

In fact all pilot projects implemented in the Batangas Bay region under UWEP Plus were a continuation of two pilot projects of UWEP I:

- ◆ PP3: Enhancement of Resource Recovery and Recycling Sector in the Batangas Bay region (BBREC cooperative)
- ◆ PP4: Integrated Sustainable Waste Management in three barangays of Tingloy
- ◆ However, the activities that were undertaken under UWEP Plus had a different orientation, and were meant to strengthen and extend the results of previous efforts.
- ◆ Support to BBREC (PP3):
 - ◆ Strengthening of management and organisation;
 - ◆ Solution of some transparency and integrity problems with the first management group;
 - ◆ Integration of the Tingloy recycling initiative with the BBREC group;
 - ◆ Expansion of BBREC's activities to include more materials; more geographical areas; more members; and a more extensive marketing reach.
- ◆ Up-scaling of ISWM on Tingloy island (PP4):
 - ◆ Building the capacities of the municipal SWM board and the SWM committees
 - ◆ ISWM Assessment
 - ◆ Initiating the process of preparing 10-Year Strategic ISWM Plans
 - ◆ A competition and campaign focused on promoting ISWM planning by designating as winners Tingloy barangays with the best ISWM performance;
 - ◆ Decentralised composting of kitchen and yard waste in barangay 13

- ◆ Formation of an association of local junk buyers to strengthen marketing capacity and connect with BBREC. Eight out of 15 decided to form an association in Q4 2002, and created by-laws and membership fees in Q1 2003. In 2003 they were also able to purchase, with the help of the UWEP Plus programme, a boat for transfer of recyclables to the coast)
- ◆ Implementation of ecological sanitation demonstrations in a few households

The pilot project activities related to BBREC are described in detail in Chapter 3.

In a sense the ecological sanitation pilot project on Tingloy was quite different from the UWEP I pilot projects, as it focused on sanitation and not on solid waste management. It suffered from a number of problems that are explained in Chapter 5.

State of the pilot projects at the end of UWEP Plus:

Support to BBREC (PP3):

- ◆ Strengthening of management and organisation: after a rigorous organisational restructuring including recruitment of a new project manager, a financial audit and financial management training, BBREC is now financially sustainable and made a net profit of P420,000 in 2003.
- ◆ Expansion of BBREC's activities: BBREC's current activities include collection of more materials, from more municipalities. Also its membership has increased from 17 to 20.

ISWM on Tingloy island (PP4):

- ◆ Build the capacities of the municipal SWM board and the SWM committees. At the barangay level, the SWM committees were able to make use of their P15,000 budget to implement their plans, improve disposal sites and set-up collection systems.
- ◆ Decentralised composting of kitchen and yard waste in barangay 13: 40 households participated, groups of 4-5 households are sharing a drum.
- ◆ Set up an association of local junk buyers: 8 out of 15 junk buyers decided to form an association in Q4 2002, by-laws and membership fees were set in Q1 2003, and a boat for transfer of recyclables to the coast was purchased.
- ◆ Ecological sanitation demonstration for households: 3 demonstration households were selected and toilets built, but due to implementation faults only one continued as an EcoSan toilet.

The municipal health unit in Tingloy received a district-level award for implementing health and waste segregation activities. This health unit was very actively involved both in UWEP I and Plus, so it learned about and practiced proper waste segregation and disposal of infectious and non-infectious waste from UWEP.

At the end of UWEP Plus a Closing Meeting was organised for 45 stakeholders. Participating institutions such as the municipality of Tingloy, the provincial authority of Batangas, PG-ENRO, BBREC and PKK received certificates of appreciation for their involvement in UWEP. All participants reiterated their intention to support and further develop the activities started under the UWEP Programme.

2.4.2 Conclusion

The UWEP Plus activities in the Philippines had realistic, practical, and generally modest goals that were developed in close consultation with stakeholders at the beginning of the

programme. The Gouda staff of UWEP had a much more limited role in management of the PPS in UWEP I than was true in any other region: in fact it could be said that the experimental decision in 2000 to ask the Regional Co-ordinator to also function as PPS manager was an important forerunner of the UWEP Plus decentralised management approach.

The stakeholder-based approach to operations and management paid off in the Philippines with a high rate of success and sustainability of the two intervention areas, Bauan City and Tingloy. Interestingly, the two pilot projects that either got significantly downsized or were dropped were larger, more ambitious, and more capital-intensive, which may have contributed to their demise. These were the community sanitation in Tingloy and the recycling centre in Barangay San Miguel. This suggests, as evidence from other regions confirms, that the ISWM approach works most reliably with modest interventions and an emphasis on participatory processes, rather than hard investment, technology, and facilities.

CHAPTER 3 THE BATANGAS BAY REGION ENVIRONMENTAL COOPERATIVE (BBREC)

3.1 Introduction

BBREC, the Batangas Bay Region Environmental Cooperative is a cooperative of junkshop operators that collect and sell various types of recyclables in the Batangas Bay region. The cooperative is active in five municipalities - Batangas City, San Pascual, Bauan, Mabini and Tingloy - with a total population of around 410,000 people (2003). BBREC was set up under UWEP I and further developed and strengthened under UWEP Plus. The experience of BBREC is a relatively successful example of formalising the informal waste sector in a participatory way.

3.2 Why this pilot project is featured here

The pilot project featured here is relevant to other cities in the South for various reasons. In almost every city in the South one can find informal actors involved in waste recovery, reuse and recycling. They are usually responsible for a large part of recycling in Southern cities. In mega-cities like Cairo, Bangalore, Manila and Lima, significant volumes of recyclables are recovered, collected and traded in the informal sector and re-enter the formal economy as industrial production feedstocks. These resources come from waste – a common property resource – and so poor people and the informal sector have access to them. Many jobs are created in this sector, especially because recovery, reuse and recycling in the South are labour-intensive processes. For example in Cairo, Egypt, 8 jobs per ton of solid waste are generated in the informal waste sector, compared with only 2-3 jobs per ton in the formal waste sector (Kamel, personal communication).

However, many disadvantages are also associated with the informal waste sector:

- ◆ Wages are low and exploitation and child labour are common, especially in waste picking
- ◆ Waste pickers, itinerant waste buyers, junkshop operators and informal recyclers are often not recognised or appreciated by the local government and sometimes neither by residents or other service users
- ◆ Working conditions are often bad, especially for waste pickers deal with hazardous materials like medical waste and glass. Very few wear any protective gear.

Working in a participatory way with the informal waste to legitimise their work and formalise their activities helps to strengthen their (political) position, to get recognition, to increase the amounts they recover, to improve their negotiating and marketing position, and to mitigate the worst aspects of their working conditions. While many interventions have sought to improve the social position of waste pickers and junk shop operators, there are far fewer examples of interventions which work on building commercial and institutional knowledge and capital, that introduce structural improvements into the informal recycling chain without disturbing its basic functioning. The BBREC pilot project profiled here was a successful experiment in creating a commercial and institutional intervention in support of one group of key informal or semi-formal waste sector stakeholders: junkshop operators.

3.3 Why there was a need for this initiative

The study of Local Initiatives on Waste Management prepared by CAPS at the inception of UWEP I revealed that there were at least 22 junk shop operators based in the Batangas Bay project area, distributed over Batangas City (12), San Pascual (5), Bauan (4) and Tingloy (1). Mabini did not have any junkshop operators (JSOs), only itinerant waste buyers (CAPS, 1997). The junk shop operators are businesses (some registered and some not), that have their own premises where they store their materials. In the Batangas Bay region they were mainly engaged in the buying and selling of bottles, metals, broken glass, soft plastics and paper. All of these materials were collected from households by itinerant waste buyers (IWBs) who traded them to the junk shops, who then had to go through a middle man (“dealer”) rather than being able to sell directly to the end-user. Prior to the pilot project, the JSOs were forced to accept the dealers’ price, based on their limited negotiating power and the relatively small volumes of materials that each JSO could mobilise in one month. During this time, the buying price of the middle men was low, (P0.40-0.60 per kilo). Because of the cooperative, the JSOs could sell directly to the end-user factories, so that the dealers (and their “cut”) were eliminated. The coop was (and now) able to sell directly to the miller or glass recycler at P2.30/kilo. The buying price of the coop from the source (small junkshops and dumpsite pickers) ranges from P1.00-1.50/kilo.

IWBs and waste pickers using pushcarts collect recyclables households and from commercial and institutional establishments. Waste pickers collect directly from the dumpsite. Many of them have their own arrangement with a junk shop operator who provides them with working capital, pays for the cart, and who buys the collected recyclables from them at agreed prices. Some junkshop operators collect directly from (commercial) establishments without going through an itinerant waste buyer. The junk shop operators themselves (in the Batangas Bay project area, as elsewhere) can be classified as small and medium-sized operators. Smaller junkshop operators sell to larger traders, and larger JSOs tend to sell to exporters or directly to end-user industries.

In the beginning of UWEP I, in July 1997, CAPS held interviews with the owners of all junkshops in the five municipalities in the Batangas Bay region to better understand their business practices and to identify the problems that they encounter. The most frequently mentioned problems were:

- ◆ fluctuating sales prices, for example the market for paper and cardboard collapsed, allegedly due to the import of waste paper;
- ◆ fierce competition among the junk shop operators;
- ◆ a monopoly exercised by one or two junk shop operators in the metal scrap business and related (imputed) price-fixing;
- ◆ the threat of reduced accessibility when junk shops are pushed by the local authorities to remove their operations to the outskirts of the city through changing zoning ordinances, based on the claim that the business forms a nuisance and a risk to citizens (e.g. noise, fire danger, etc.);
- ◆ lack of storage capacity;
- ◆ lack of teamwork among junk shop operators;
- ◆ waste buyers that are not loyal to the junk shop operators who has given them working capital, but sell the collected recyclables to other junk shop operators that offer higher prices.

Before UWEP I the JSOs in the Batangas Bay area were semi-informal actors in waste management: they were mostly registered, but they did not pay social security nor all taxes, and the relationship between the JSOs and the governmental institutions can best be described as uneasy. They clearly expressed a need for more collaboration between junkshop operators, as well as for more protection of their market niches and status. As a result of the formation of the co-operative, they are now fully formalised and they are paying social security benefits for the employees, as well as an annual business tax based on declared capital plus monthly (3%) percentage income tax based on the declared monthly gross sales.

3.4 Objectives

Based on the problems that junkshop operators in the Batangas Bay region faced the main objective of project was to improve the capture, recovery, and marketing performance of the recycling sector in the Batangas Bay area, which would, in turn, result in higher income and more employment. At the same time, it would reduce the volume of waste to be disposed of and decrease the pollution related to waste. Five strategies were identified that could contribute to achieving this main objective:

- ◆ Improved efficiency in operation by introducing additional value added activities to upgrade the marketability of their presently collected recyclables;
- ◆ Increase the volume and variety of collected recyclables, handle higher volumes, and achieve better marketing reach and penetration within the end-user industrial production sector;
- ◆ Work towards horizontal integration or formation of a cooperative of JSOs that would advance their interest by legitimising JSOs as partners in SWM and giving them recognised status that would help them deal with industries, public and private offices and other entities involved in solid waste management;
- ◆ Product or market development for different products to sell; and
- ◆ Forward integration or creating the opportunity to deal with end buyers.

3.5 Activities under UWEP I

The creation of BBREC was started as a pilot project (PP3) under the UWEP I programme. The following activities were undertaken as part of UWEP I:

1. In-depth study
2. Project orientation workshop
3. Study tour
4. Formation of the cooperative
5. Consolidation and legalisation of the cooperative
6. Capacity building
7. Market research
8. Start of operation
9. Official endorsement and recognition
10. Expansion of collected recyclables
11. Efforts to expand the membership

In-depth study

During the Local Initiatives Study it had become clear that a pilot project revolving around setting up a cooperative of junkshop owners would be an interesting potential intervention for UWEP I. A more in-depth study and consultation was undertaken:

1. To investigate the social and cultural circumstances surrounding the business and premises of the JSOs;
2. To verify the existence of the JSOs identified in the Local Initiative Study, and confirm whether they were operational or not;
3. To discuss the project concepts and solicit the feedback of JSOs about the project;
4. To identify potential people who could be of help to the project and other kinds of resources; and
5. To identify other concerns that might have an effect on the process of implementation.

The in-depth study and consultation was done through house-to-house visits and individual interviews with informal and formal leaders. It appeared that JSOs were most interested to know how the project would be beneficial to them.

3.5.1 Project orientation workshop

A project orientation workshop was organised for all stakeholders in the third quarter of 1998. The stakeholders invited included: the local chief executive (mayor); the municipal planning and development coordinator; the barangay council member of San Miguel; and some junkshop owners and managers. The JSOs were informed of the project's objectives, rationale, as well as roles and responsibilities of all stakeholders. Other topics discussed were information on waste segregation, recycling activities, effects of waste on the environment, possibility of implementing waste segregation, and setting up a structure for centralised waste management activities. The workshop facilitators stressed the importance of JSOs in solid waste management in the Batangas Bay region, acknowledging that this role was not widely recognised. The attendees believed that if the JSOs would involve themselves in more activities and would become more organised, it might have a wider impact and generate new opportunities for higher income for themselves, as well as improve the prices they could offer to itinerant waste buyers.

In the preparatory work for the said activity, some JSOs helped in the distribution of invitations for the workshop and facilitated a venue for the workshop; 15 JSOs attended and participated.

3.5.2 Study tour

In the third quarter of 1998, 12 JSOs visited Linis Ganda, a federation of cooperatives of JSOs in Metro Manila. Linis Ganda provides development assistance to JSOs and itinerant waste buyers to form cooperatives, as well as helping waste pickers achieve recognition in their own zones of operation. For JSOs, Linis Ganda offers loans, and also supports the JSOs by linking them with end-buyers and recyclers. They play also an important role in general advocacy of reuse, recycling and recovery in Metro Manila.

The study tour provided the JSOs with the opportunities to see the viability and advantages of forming a cooperative. They learnt that being organised means the capacity to demand higher prices for recyclables, recognition from different offices and associations, and being able to deal with financing institutions.

3.5.3 Formation of the cooperative

The conduct of a pre-membership seminar paved the way for the formation of the cooperative. This seminar lasted two days and focused on basic rights and duties of the members and on proposed functioning and benefits of a cooperative. Out of the twenty-five identified and contacted JSOs, 17 agreed to form a cooperative and called it BBREC: Batangas Bay Region Environmental Cooperative. The members agreed to pay P500 as an initial membership fee and P8,000 as subscription capital (returned if they should leave the co-op.. The mode of payment depended on the capacity of the particular member, but it should be effectuated within a one-year time frame. Aside from the mentioned financial obligations, the members also agreed to pay monthly dues of P50 (this fee was discontinued after three months because working capital proved and sales turnover sufficient for sustained operations).

3.5.4 Consolidation and legalisation of the cooperative

A series of meetings and consultations were conducted that resulted in the preparation of a constitution and by-laws for the cooperative, a one-year plan of action, and creation of an organisational structure. BBREC thus was legally established as a multi-purpose cooperative in 1998. It has a board of directors of five persons, all junkshop owners. At first it had a project manager and a fulltime secretary/bookkeeper for day-to-day management. Every year BBREC organises a general assembly where all its members are gathered and decide on major issues.

At the beginning, marathon consultations were called at the level of the elected board of directors. This was to trouble-shoot the variety of problems met during the initial stage of setting up the cooperative and starting its operations.

3.5.5 Capacity building

To further deepen the understanding of the members, CAPS staff conducted two important training-seminars for BBREC: a refresher course called the PMES (Post Membership Education Seminar), and a basic course on leadership.

The refresher course on PMES was held for the benefit of members who were not able to complete the two days seminar on cooperatives. The purpose was to deepen their appreciation of the basic principles and objectives of cooperative, and understand roles to play to achieve success. In contrast, the basic course on leadership was conducted to deepen the understanding of the leaders, especially the directors/committee heads, on the concepts of genuine and collective leadership, and the needed qualities and skills of a good leader.

3.5.6 Market research

WASTE provided Gouda staff to support the formation of BBREC by doing market research to further explore the market for recyclables presently gathered by the JSOs in the region as well as for recyclables not yet collected at that time, as well as to identify potentials for further processing of recyclables within the region.

Cooperative members were interviewed individually to determine their present situation and condition. Others interviewed were representatives from Linis Ganda Foundation, Metropolitan Environmental Improvement Programme (MEIP) of the World Bank and the Department of Environment and Natural Resources and the Recycling Movement of the

Philippines. Finally, phone interviews were done with some end-buyers situated in Metro Manila, Pampanga, Bataan, and Cavite, focused on determining the types, qualities, and prices of different recyclables and the terms and conditions set by the end-buyers.

3.5.7 Start of operation

Based on the marketing study, paper was selected as the first recyclable for BBREC to recover and collect, both because of promising market conditions, and because no members from the cooperative were already specialised in this particular recyclable. This meant that it would add to their operations, and not risk interfering with any member's present operation or business activities.

UWEP I funded the purchase of a truck for collection of recyclables, and contributed to the equipping of the office, which was located for seven months of start-up in the offices of the Batangas Social Development Foundation (BSDF). BBREC set-up this office and started operations in December of 1999.

The members themselves either did the actual collection of paper from large generators, and the the coop also collected directly through the activities of its project manager. The cooperative bought all paper collected by members, for which they receive preferential prices and payouts of dividends from a patronage refund at the end of the fiscal year.

3.5.8 Official endorsement and recognition

Although there were losses in the sales of the first delivery of paper, this did not stop the cooperative from pursuing the initiative. Spearheaded by the board of directors of BBREC and in collaboration with PG-ENRO, CAPS and BBREC initiated consultations with local officials both on the provincial and municipal level. Consequently, the five Municipal Mayors in the Batangas Bay area and the Provincial Governor simultaneously distributed endorsement letters to the different companies and establishments.

Remarkably, offices, companies and establishments started calling the BSDF office (being the physical base of the cooperative) inquiring about the cooperative and its project, and requesting service for paper recycling. At the close of UWEP, the cooperative has among its customers, several banks, industrial entities like Shell, Caltex and AG&P, as well as commercial and institutional establishments.

3.5.9 Expansion of collected recyclables

To provide for new revenues, in the hiatus period between UWEP I and UWEP Plus (April-October 2001), members of the coop considered the feasibility of systematising the collection and marketing of plastics as an additional product. This particular product was identified, because with only collection of paper the cooperative was experiencing financial hardship.

One of the members of BBREC, who was relatively experienced in handling plastics, was designated to manage the process of collection. It was decided that 50 cents of earnings per kilo of plastic will be given to the cooperative and the other 50 cents will be given to the member in charge of the collection, as recognition for the efforts. Plastic coming from industrial generators is now directly collected by the cooperative through activities of its project manager.

There was another attempt to involve the co-operative in collecting glass bottles, a material collected by some of the members and sold through low-level dealers for low prices. However, some members of BBREC opposed the idea because of their present relationship with their dealer or end-user. As is frequently the case, this is an example of existing collectors fearing entry of new players because an increase in the supply of a recyclable material usually depresses the price, at least in the short term. The opposing JSOs participate in arrangements that involve set prices per bottle and access to additional working capital in exchange for exclusivity on buying. On the basis of this resistance, BBREC decided not to pursue recycling of glass at that time.

3.6 Activities under UWEP Plus

Activities undertaken with BBREC as part of UWEP Plus included:

- ◆ Review of operations, accounts and books
- ◆ Organisational restructuring and capacity building
- ◆ Expansion of collected recyclables
- ◆ Geographical expansion of collection areas
- ◆ Increased benefits to the members
- ◆ Expansion of facilities
- ◆ Expansion of membership

3.6.1 Review of operations, accounts and books

UWEP Plus started with an in-depth assessment of operation, accounting and bookkeeping procedures of BBREC. It turned out that the project manager had not accounted for some transactions, and that there were significant problems with the financial administration. Membership fees were not being paid regularly, nor being collected (other than as an entrance fee); membership had stagnated and attendance during General Assemblies was low. Other signs of mismanagement included un-recorded and un-deposited sales transactions and revenues, and non-payment of delivered goods from members resulting in lower material contributions from the members.

3.6.2 Organisational restructuring and capacity building

Although these management difficulties could have threatened the survival of the co-operative, the transparent and participative approach to problem-solving turned this problem into an opportunity. Thus, after further investigation and discussions with members and the board of directors, members decided to dismiss the project manager, and install a new full time officer-in-charge as well as a permanent bookkeeper. These changes were made in 2002, concurrent with the ISWM assessment in UWEP Plus. (Q2 to Q4 2002). A formal financial audit was also conducted which delivered additional advice on accounting and bookkeeping practices. In addition, the board of directors of BBREC received training in financial management and leadership (Q3 2002).

3.6.3 Expansion of collected recyclables

One indicator of renewed health and dynamism of BBREC has been its continual exploration of new materials and new operations. A feasibility study into tin can collection and plastic pelletising was carried out in Q2 2002. The study showed that tin can collection would be an interesting field for BBREC to venture into, while plastic pelletising would be difficult in a market where many niches were already occupied, and where prevailing market conditions

did not appear to favour new entrants. However, later the idea of tin can collection was also put on hold, because of unfavourable market conditions. Instead, beginning in 2003 (and based on the increasing trust that members had established among each other) the cooperative returned to the idea of an intensified focus on broken glass, which (in contrast to whole bottles) had not been systematically collected at all in the region (Q1 2003). Other materials that were added to the existing paper and plastics included galvanised iron sheets and PET soft drink bottles.

3.6.4 Geographical expansion of collection areas

Geographic expansion also indicates sustainability and dynamism of the co-operative. BBREC, as part of its expansion programme, approached all neighbouring municipalities. Originally BBREC collected recyclables from five municipalities: Batangas City, San Pascual, Bauan, Mabini and Tingloy. In 2003 other municipalities were included: Alitagtag and Padre Garcia both gave BBREC the exclusive rights to purchase materials from their municipal materials recovery facility. In 2003 BBREC also obtained a license to establish and operate a recyclables buy-back centre in Calapan in Mindoro Island, a major island off the coast of Batangas Bay. In Alitagtag and Padre Garcia, BBREC got the privilege because it offered the best price to buy their recyclables. In Mindoro, collection was and is open to all buyers, but BBREC offers a reliable service.

3.6.5 Increased benefits to the members

BBREC started in 2002 to provide its members with group insurance and social security benefits, something which all formal sector businesses do, but which the semi-formal JSOs did not reliably offer. All employers are mandated by law to provide social security benefits to all their regular employees. In BBREC's case, the coop pays for both employer's and employee's payment shares. The group insurance for coop members has been planned for quite a while, but is only being implemented now.

Under UWEP I, a credit fund facility had been identified as a take-off activity of the cooperative. The facility was meant to provide financial support (loans) to BBREC members who were in need of additional working capital. However, due to insufficient funds, the implementation was temporarily shelved. Nonetheless, the project was pushed through under UWEP Plus, with a seed fund of P65,000 based on revenues and savings related to financial operations under UWEP I. Further, a proposal for a bigger credit fund facility worth P1,500,000 to be disbursed in three years was submitted to AusAid in Q3 2002. The proposal was accepted and approved in principle but due to internal reorganisation within AusAid, so far nothing concrete has come out of this proposal.

3.6.6 Expansion of facilities

During UWEP Plus, the office and warehouse of BBREC were moved to a bigger and more accessible site in San Pasucal town, a few kilometers from the old Bauan site.

The UWEP Plus programme also contributed to the purchase of a second truck, the major part of which was financed by BBREC itself, with UWEP Plus paying only 17% of the total. This second vehicle is being used to deliver goods to the recycling industry, especially paper and cardboard. The purchase almost doubled the revenues of BBREC, as they are now able to transport and sell 75.5 tons a month instead of 45.

3.6.7 Expansion of membership

After failed attempts during UWEP I to expand the membership of BBREC, under UWEP Plus the efforts were more successful due to the improved profile and performance of the cooperative. Three more JSOs joined BBREC in Q3 2003.

3.7 Stakeholder involvement and ownership

A number of stakeholders – persons or organisations that have an interest in the activity- were involved in UWEP I and UWEP Plus. These stakeholders and their roles are listed in ***

Table 3. Stakeholders and their roles in the BBREC Pilot Project

Stakeholder	Role
- Junkshop owners, members of BBREC	- Participate in General Assemblies - Pay membership fees, subscribe capital and monthly dues - Receive membership benefits - Collect recyclables on behalf of the cooperative
- BBREC Board of Directors	- Guide the cooperative, make policy, control (financial) management
- Project manager and other executive staff BBREC	- Day-to-day management of the cooperative - Collect recyclables on behalf of the cooperative - Deliver goods to recycling industry
- Itinerant buyers and pushcart collectors	- Buyers and collectors of recyclables at source.
- Junkshop owners, non-members of BBREC	- Competitors of BBREC, potential new members
- Recycling industry	- End-buyers of BBREC
- Local and provincial authorities, organisation of industries	- Endorse activities of BBREC and recommend them with governmental offices and industries
- UWEP Plus staff/CAPS	- Facilitate and advise the establishment and operation of the cooperative
- Armed group involved in scrap metal trade	- Intervene in trade activities, threat if BBREC would enter into scrap metal trade

The junkshop owners, represented in the Board of Directors and in the General Assembly, own the initiative. They all have a stake in it: they bought their share in the cooperative with subscription capital. It is in their interest to continue with it, because:

- ◆ They get annual dividends from the sales of recyclables
- ◆ They have a higher volume of business, because they now trade in a wider variety and bigger volume of materials;
- ◆ Their cash turnover is more reliable and occurs sooner, since by selling certain materials to the cooperative, they get paid earlier than by the markets themselves (that is, the co-operative floats an advance before it sells the materials itself).
- ◆ They have access to a ready source of working capital
- ◆ from formal source which is the credit fund and informal from co-members.
- ◆ BBREC membership adds prestige and now opens doors with municipal and industrial suppliers and generators, and also in the waste trading business.

At the same time, members are able to gradually formalise their activities: for example they register with government agencies, pay taxes, and link up social security systems. This has wider social benefits as well.

In the beginning, the JSOs had difficulties understanding that they owned the cooperative and were responsible for its operation, not the UWEP programme. This was partly due to the attitude of UWEP staff that executed tasks for the cooperative instead of advising them. The spirit of working as a cooperative and the feeling of responsibility had to grow, and the decentralised, hands-off management approach in UWEP Plus facilitated this. A similar development could be observed among the board of directors who had to get used to their role of leading the cooperative and controlling its (financial) management.

3.8 Conclusion

After the organisational restructuring of BBREC in early 2002 the cooperative became financially viable and sustainable within a number of months. Other factors that contributed to the success were the increase in types of recyclables collected, the increase in volume of traded materials and the geographical expansion. They led to:

- ◆ 90% attendance at the General Assembly in Q3 2002
- ◆ A dramatic increase in sales and profits (from a negative balance in Q3 2002 BBREC went to P420,000 profit in Q3 2003)
- ◆ Consolidated membership, and regular payment of membership fees.
- ◆ In the fall of 2003, BBREC even indicated their willingness to pay Revie, UWEP Plus city coordinator, to work as management adviser for them, once the UWEP programme closed.

BBREC has had a rough ride in some aspects, but in 2003 there were signs that the organisation had matured:

- ◆ The members perceive clearly the benefits they obtain from membership
- ◆ They are proud of being a member of BBREC
- ◆ They are able to set aside personal differences when trying to solve business related problems
- ◆ Officers and members look how they can serve and continue support of the cooperative, e.g. in terms of lending their tie or vehicles for free whenever needed.

The cooperative does not stop looking for or identifying new contacts. They continue to look for new sources of recyclables and negotiate for higher prices with the end-buyers.

CHAPTER 4 THE IMPACT OF UWEP ON THE REGION

4.1 Situation in Batangas before UWEP

The specific UWEP-Plus goals are to contribute to:

- ◆ **Building of *capacities* of local actors**
- ◆ **Development of appropriate *models***
- ◆ **Establishment of functional *systems***

4.1.1 *Capacities of local actors*

SWM was not a top issue and priority among the local governments in the Batangas Bay Region. In fact, only Batangas City had any kind of solid waste management plan prior to UWEP. The solid waste capacities of all the five local governments at that time can be described in general as limited to non-existent, even though they each had SWM-related ordinances, like anti-littering, except Tingloy which had none. Enforcement of these ordinances was weak, it almost never occurred that violaters were caught, apprehended, or fined.

Batangas City, at that time, was already experimenting with segregation-at-source in some pilot barangays. Kerbside collection was done mostly in the “poblacion” or town center area using open dump trucks and a few compactor trucks. Rural areas are commonly without service. For example, in Batangas City, only 36 out of 105 barangays had collection service. In San Pascual town, it was 10 out of 40 barangays serviced. Junkshops collected only whole bottles, some types of soft plastics, and metal. They operated individualistally, in fierce competition with each other, in the BBR, and succeeded in diverting a small quantity of solid waste to recycling and reuse. Revenues were low and workers for the JSOs did not have social security or benefits.

At the time UWEP began, the BBR was beginning to experience some degree of changes when it came to urban environmental management. This was due to the UNDP-GEF-IMO programme on pollution prevention from marine (ship and port waste) and land (municipal solid waste, agricultural and industrial waste) based sources. Batangas Bay is one of three pilot sites of the IMO programme, the others were in Xiamen and in the Malaca Strait. The provincial government was the host partner of the program and it was the recipient of capacity building activities such as water and air quality monitoring training and equipment.

4.1.2 *Appropriate models*

In the early 1990s, the concept of a Private-Public Partnership model as an environmental management approach was introduced for the whole province of Batangas as part of the IMO programme. By 1994, the awareness building phase was introduced advocating cooperative efforts among the government, industry and scientific sectors. By 1996, voluntary agreements to reduce waste, eliminate illegal dumping and to put up long term waste management systems by 2000 were signed.

On the ground however, there was no integrated SWM model to speak of in the BBR except for Batangas City where officials had become aware of the Zero Waste Management concept of the Manila-based NGO, the Recycling Movement of the Philippines, Inc. (RMPI), which has strong ties to the recycling community on the West coast of the US. Before UWEP,

Batangas City had already established a Mother Redemption Center and several Barangay Redemption Centers as pilot project. The idea was to segregate-at-source at the barangay level, meaning separating the recyclables, bio-degradable and the residual waste. The recyclables and bio-degradable were consolidated in the Mother Redemption Center while the residual waste is brought to the dumpsite by government trucks.

UWEP Plus brought more and more commercialised recycling activity to the region, and increased sustainability and effectiveness.

4.1.3 Functional systems

The five cities in the BBR all have the simple “collect and dispose” type of SWM system. The limited collected solid waste are disposed mainly in open dumpsites operated by the city governments. In Tingloy, there was no SWM system to speak of, and also no collection service. There was no specific dumpsite, people either burned, buried or indiscriminately threw their garbage in open areas like the creeks, rivers, mangrove area and the sea.

There was no segregation at source except for bottles, some plastics and small pieces of metals at the household level. These were collected by small junkshop operators who were only semi-formalised and working for low rewards. Among the big industries along the coastal bay area, heavy scrap metal collection for recycling was already established and controlled by the Black Sharks. In Tingloy, only bottles, particularly the 300 ml gin bottles, were collected and sold in the mainland for reuse.

4.2 Situation in Batangas now

4.2.1 Capacities of local actors

The BBR has experienced many improvements as far as SWM is concerned. General speaking, local stakeholders increased capacity regarding SWM can be attributed to three main factors: 1) the enactment of the national SWM law called, the Ecological Solid Waste Management Act of 2000 (Republic Act 9003); 2) the UWEP programme and, 3) the IMO programme.

One of the requirements of the RA 9003 is the creation of SWM bodies from the national to provincial, and municipal levels. Among the earliest activities of the UWEP Plus was to conduct of a seminar workshop on the requirements of RA 9003. Local stakeholders from government and private sectors invited to attend and learn the salient points of the law. Now, all the cities in BBR have in place their SWM Boards composed of representatives of different stakeholders, like the local government, the NGO and recyclers. The SWM Board is the planning and policy making body for SWM in every LGU.

In Tingloy, there exist not only the Municipal SWM Board, but also the SWM Committee in every Barangay to implement SWM projects. In Tingloy, the SWM Board has managed to form technical working committees to complete its 10-year SWM plan. Tingloy’s SWM plan so far is the only plan among the BBR cities that has passed the provincial level evaluation. Also, UWEP has managed to organize a community-based multi-sectoral organization solely focused on SWM.

The law also states the establishment of multipurpose environmental cooperatives to undertake directly or indirectly the requirements of the law. In BBR, BBREC was established as a cooperative even before the law was enacted. During UWEP Plus, the cooperative, called the Batangas Bay Region Environmental Cooperative, was strengthened into a solid, sustainable organization through various management capacity building seminars and business development exercises.

Because of the IMO programme, the Province of Batangas was able to institute an Environment and Natural Resources Office. Pursuant to the PPP programme, the IMO has mobilized the local governments who have all agreed to put up a common SWM facility with a sanitary landfill and composting facility. However, due to political and financial difficulties, the facility has not been established yet.

4.2.2 Appropriate models

It is fortunate that UWEP's ISWM framework is similar and complimentary with the goals and objectives of RA 9003. Both espouse stakeholders' participation in SWM, segregation-at-source, waste minimization, recovery, recycling, reuse and composting. Slowly but surely, the mandates of RA 9003 are taking root within the local government units, as these move to actually preparing and implementing ISWM plans. In terms of waste recovery, recycling and reuse, the successful establishment of BBREC is perhaps the most important contribution of UWEP in the region. Now, the JSOs are operating as a group able to collect more recyclables in terms of quantity and types of material across the region. Paper, carton and new types of plastics, for example, are now being collected rather than being burned or thrown in the dumpsites.

4.2.3 Functional systems

In spite of the RA 9003, there are not many changes in the Batangas Bay area in terms of functional system on the ground, except for Tingloy, the focus city of UWEP Plus. In other cities, curbside collection of mixed waste is mainly concentrated in the urban barangays. Dumpsites are still the main mode of disposal since modern, state of the art sanitary landfills are too expensive for most local authorities to build. Besides, the SWM facility under the PPP scheme promoted by the IMO has experience a setback since the host community had a change of mind, and since finding a new host site is proving to be very difficult, not only in Batangas but also for the rest of the country. The NIMBY syndrome is very much alive.

As indicated above, Tingloy now has simple SWM system in place, with decentralised management, that does not depend on a large (regional) landfill. It now has a collection system in the poblacion barangays, a controlled dumpsite, and an association of junk buyers affiliated with BBREC that collects recyclables in all of the 15 barangays around the island. Collection is mostly done by boat since there is no road network around it.

4.3 Lessons learnt

1. Role/acceptance/attitude/cooperation of local government units has been very vital in implementing ISWM programme. It is important that the local chief executive understands and is committed to the project. Preferably, any intervention in a locality should be demand-driven.

2. Involvement/participation of stakeholders results in better awareness and a more positive attitude due to beneficial effects or organised solid waste management for households and communities. Knowledge building, hand-on experience of stakeholders in the implementation of ISWM activities and ownership of the program have been very important components to ensure sustainability.
3. In spite of above, there are still pockets of personal or institutional resistance to ISWM concepts/ practices. This resistance is focused on the conviction that it is government that should manage solid waste, since they get paid for it. A typical expression of this resistance is: “why segregate when I pay the collection fee”.
4. Development programs including SWM are not immune to negative impacts of political conflicts.
5. Execution of MOU facilitates smooth working relations with stakeholders.
6. Using other issues such as health and tourism can enhance appreciation of SWM management program. Many people relate better to the ISWM when they appreciate the benefits in other aspects of their lives.
7. A national legal framework such as RA 9003 is a big help in the implementation of the project.
8. Having a “Champion” in the community and political will of the local officials are a must in ISWM projects. Otherwise, there is a tendency for the project to collapse when the programme is finished and the intervention agents are gone.
9. Caution is needed in informing project stakeholders and beneficiaries about project funds. There is a tendency among beneficiaries to consider project funds as dole out they can get just by asking for it without justification and/or not working for it
10. Baseline and local initiatives studies are necessary in the proper identification of problems, issues, resources and concerns of key partners and stakeholders. They provide important guide to planners and development agents.
11. Hiring skilled, dedicated and committed project staff should not be overlooked. The staff can make or break the project since they are the frontliners in the “battle field” of urban environmental management programmes.

4.4 Obstacles and barriers

BBREC met several obstacles since its formation. It is useful to review them and see how they were solved in the process of UWEP implementation.

4.4.1 Unavailability of the members to attend meetings and seminars

Despite formal invitations given to the members, and consultation and availability checked prior to the setting of the date, some members were still not able to attend the actual activity. This is either because of the need to attend to their business or of personal concerns.

Resolution: The regular monthly meeting of the General Assembly was removed. Instead, each member will be furnished with the minutes of the regular board of directors meeting which is every first Saturday of the month. Penalties are also adopted for being absent without valid and written explanation 2 days before the actual meeting. Penalties are P150 for the officers and P75 for regular members.

4.4.2 Putting into practice the principle of cooperativism

Since the members were very much used to operate individualistically, most of them needed time to grasp the concept and principles of cooperatives. The different position of small and large JSOs comes into play here as well. Small JSOs often borrow additional working capital from bigger JSOs in exchange of the exclusive buying right of collected recyclables. As a result, instead of bringing the collected recyclables directly to the cooperative, there were cases that small JSOs deliver their products to bigger JSO, from whom he or she has borrowed money.

Resolution: Although this is viewed as a continuing process, still efforts are exerted to collectivise operation of the cooperative. This is being done through continuous individual or small group discussion of the basic principle of cooperatives. As part of the process, standardisation of buying prices of recyclables, particularly of paper and plastics; continuous follow-ups on payments of agreed contributions such membership fee, monthly dues, and subscribe capital. In addition, members are also motivated to be involved in discussions, meetings, seminars and other group activities. Additionally, time was spent on consensus building in decision making within the cooperative.

4.4.3 Lack of recognition from different government agencies

Because of this condition, it was hard for the cooperative to solicit the support from the different companies, establishments and offices. Recognition or endorsement by concerned LGUs helped to build the credibility of the cooperative and in some ways influenced the attitude of companies towards the cooperative.

Resolution: Coordinate with the Office of the Provincial Governor for endorsement to the different LGUs and BCRMF. BCRMF is an organisation of industries in the Batangas Bay area. This coordination was in collaboration with the Provincial Government-Environment and Natural Resources Office and the UWEP programme.

4.4.4 False hope of having additional working capital through the project

Some JSOs were motivated to become a member of BBREC because they hoped that the project would give them additional working capital. However, this did not materialise during UWEP I because of disapproval of the proposal by the programme manager. Generally, the BBREC members were demoralised by this incident.

Resolution: A meeting was conducted to clarify with the members of the board of directors of the negative response of the programme. The programme believed that there are many local institutions, which can be tapped for loan assistance. In fact during UWEP Plus BBREC managed to get approval for a proposal for a credit fund facility from AusAid.

4.4.5 Lack of former project staff's skills and knowledge in handling community projects

At the early stage of the project, the project staff started to perform administrative functions for the cooperative instead of her providing technical assistance and supervising the over-all operation of the cooperative. The officers were the ones telling her what she should be doing instead of her acting as facilitator.

Resolution: Upon replacement with a new staff member changes were introduced, specifically in the division of tasks within the cooperative. There was a continuous discussion of the need for BBREC board and members to be equipped with the necessary skills and knowledge to effectively manage the cooperative in the future.

4.4.6 Interpersonal relationship among members and officers.

There were times that suggestions and decisions are more based on personal attachments and not on an objective analysis of the situation. An example was finding a new storage place for the cooperative. When a new site had been identified, the officer-in-charge was opposed to it, because he felt the owner of the new storage place had let him down in business in the past. This kind of relationships, which date from before the existence of the cooperative, affected decisions for a long time.

Resolution: Good facilitation skills in meetings, consensus building in coming to decisions and strict implementation of what has been agreed upon, proper way of handling conflicts through individual or small group discussion, continuous discussion of the principle of cooperatives.

4.4.7 Lack of skills and knowledge in managing a group project (paper and plastic)

This reflected the leadership style of some officers of the cooperative and the person in-charge of the paper project. These persons lacked the interest to reflect on their personal experiences in business and to abstract lessons learned and apply them to the co-operative.

Most if not all of the members of the coop, the officers and the project manager were all used to the informal way of managing a small business. All expenses, revenues and resources were treated as personal and therefore recording was incomplete. By the end of UWEP I, their level of managerial skills and appreciation of business management have not yet evolve to the formal level needed to manage and operate a formal organization like a cooperative. The UWEP programme had a break of more or less one year between UWEP I and UWEP Plus (2000-2001) and so close supervision over BBREC's critical growth period was practically nil. This deficiency was addressed in UWEP Plus by conducting several capacity building seminars like financial and general business management and problem solving meetings.

The project manager had a lack of skills in maintaining and dealing with contacts, planning of schedules for pick-up of papers, financial recording and accounting.

Resolution: The project staff monitored and supported the project manager as much as possible, both in dealings with the different companies, establishments, industries and offices, and in the process of reporting expenses.

4.4.8 Intervention of organised armed group

When the operation of the paper-marketing project kicked off, an informal organisation of big JSOs (Black Sharks) sent a word that a courtesy call must be made to them before the cooperative could do business.

Resolution: Together with the project staff the cooperative initiated three meetings with the representative of the informal organisation named Black Sharks to clarify the objectives and activities of the cooperative. In the final consultation the representative stated their agreement not to intervene in or further threaten the project of the cooperative as long as the latter would not agree not to involve itself in the collection and trading of scrap metals.

4.4.9 Inadequate financial management

At the start of UWEP Plus it was found out that accounting and bookkeeping in BBREC had been less than accurate. A thorough review of the books showed that many transactions had not been accounted for and that the project manager had appropriated money from BBREC for personal purposes.

Resolution: The project manager was dismissed. A new fulltime project manager and a permanent secretary/bookkeeper were hired. A strict bookkeeping and accounting system was introduced and the capacities of the board of directors in financial control and supervision were built.

4.5 Conclusion

The solid commitment to participatory and transparent development methods paid off, in the case of BBREC, in that the organisation, which was set up on a project basis, is now operating commercially. This provides a continual and sustainable impetus to the ongoing solid waste management and recycling activities unfolding themselves in the region.

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ANNEX 1 SUMMARY OF FINDINGS AND RECOMMENDATIONS OF THE ISWM ASSESSMENT FOR TINGLOY, THE PHILIPPINES

[Chapter 6 from: Assessment of Integrated Sustainable Waste Management (ISWM) System in Tingloy, Batangas, Philippines, Dan Lapid and Dominador Manguiat, 2002]

As discussed in the assessment above, the ISWM system in Tingloy needs much improvement in many, if not all, fronts. An ISWM system only exist in the Poblacion. Even that remains to be improved. As far as stakeholders are concerned, the municipal government is supportive of ISWM but has not assumed a decisive role in the implementation of ISWM system. The barangay governments are doing their best but they need the full leadership and support of the municipal government. PKK is still weak organizationally and financially. Collection of garbage and collection of service fees are sustained but has a tendency to decrease. The disposal site is under-utilized and not properly managed.

It is a good development and opportunity that a new law on waste management has been passed by the national government in 2001. Fortunately, the UWEP I pilot projects in 1999-2000 are in consonance with the new law. The law, therefore, is a huge and timely institutional and legal platform for Tingloy, as well as, to pursue ISWM “up-scaling” to the fullest possible under the programme of UWEP Plus.

Under the broad goal of up-scaling ISWM activities in Tingloy, this assessment proposes the following major recommendations:

1. Facilitate the constitution of the Municipal Solid Waste Management Board of Tingloy.
2. Through the MSWM Board, formulate a strategic ISWM plan for the whole municipality.
3. Formulate and implement UWEP Plus pilot projects designed to enhance the future directions of the ISWM in Tingloy in 2002-2003.

Specific recommendations are:

1. Convince the LGU to allot a bigger budget for SWM;
2. Turnover of management of the disposal site from PKK to LGU;
3. Provide for more education and information activities to all stakeholders;
4. Upgrade of disposal site;
5. Enhance recovery of recyclables in the whole island;
6. Plan for an appropriate composting pilot project; and
7. Improve collection in the Poblacion with a motorized collection vehicle.

See Box 6.1 for the suggested activities of the Stakeholders.

Box 6.1. Specific Recommendations of Stakeholders during Consultations

Stakeholders

1. Plan and implement activities that would revive sectoral members' participation in different forthcoming PKK activities.
2. Consult with the Mayor regarding possible funding and other forms of assistance.
3. Revive linkage with other partner agencies.

Segregation

1. House to house distribution of popularized education materials visualizing topics on segregation like flyers and comics.
2. Involvement of the school. This was through the help of school teachers and administrators to adapt a policy that segregation be a requirement of each enrolled students during clearing process of students.
3. Strict implementation of the Barangay Ordinance on Segregation.

Collection

1. Have a dialogue with the Mayor regarding the possibility of funding the collection of wastes through the provision of monetary assistance to Eco-Aides, purchasing new fabricated collection vehicle for the three barangays and the like.
2. Make the Eco-Aide attend training related to their work.
3. Try to incorporate or supplement funds from the barangay regular funds that would beef-up the maintenance budget of the ISWM system. One good source identified was the portion of budget of the SK.
4. Convince the households through the conduct of a "people's day" in the waste management site. In this activity, the significant number of residents of each service barangay would be visiting the waste management site and there they would be given orientation on the importance of their participation (i.e., on segregating their wastes at source and voluntary giving of their monthly dues) to the sustainability of the ISWM system being implemented and the service-life of the controlled dumping site.

HH contribution

1. Conduct consultation with the Mayor for possible assistance in the forms of funds and personnel. The Mayor could also mediate between PKK and private entities in the aspect of incorporating the monthly household dues to the monthly bills these private entities were issuing to their clients (i.e. electric bills and water bills).
2. Implement "peoples' day" wherein the Mayor makes time to hear the aspirations and problems of the residents.
3. Make internal rules and policies in barangay councils regarding non performance of some of the barangay officials.

Disposal

1. Conduct consultation with the Mayor regarding the different problems observed in waste management site.
2. Conduct "people's day". Part of the activity here would explain to the attendees the importance of no grazing activity in the site.
3. Collaborate with other agencies with regards to the training of the wold-be site caretakers.
4. Maximize the use of the site through recycling, composting, gardening and nursery production.
5. Conduct immediate repair of the gate and plan for the addition of height of the fence.
6. Pass an ordinance banning the grazing of animals inside the waste management site and its immediate vicinities.