

GOOD PRACTICES IN LOCAL GOVERNANCE: FACILITY
FOR ADAPTATION AND REPLICATION (GO-FAR)
PROMOTING LOCAL ENVIRONMENTAL PLANNING AND
MANAGEMENT (L-EPM)

Turning the Heap: The Other Side of Garbage

The Integrated Solid Waste Management Project (ISWMP)
Barangay Gusa, Cagayan de Oro City

REPLICATION MANUAL



**SAFER RIVER, LIFE SAVER
FOUNDATION, INC.**



LICEO DE CAGAYAN UNIVERSITY
CAGAYAN DE ORO CITY

**CENTER FOR ENVIRONMENTAL
STUDIES IN MINDANAO**

Anchor Institution of GO-FAR/L-EPM Project



DEPARTMENT OF INTERIOR AND LOCAL GOVERNMENT
Region 10
Cagayan de Oro City



**CITY GOVERNMENT OF CAGAYAN DE ORO THROUGH
CITY LOCAL ENVIRONMENT AND NATURAL
RESOURCES OFFICE (CLENRO)**
Cagayan de Oro City



**UNITED NATIONS
DEVELOPMENTAL
PROGRAMME**





Republic of the Philippines
DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT
Region 10 - Northern Mindanao

FOREWORD

The Local Environmental Planning and Management Good Practices in Local Governance: Facility for Adaptation and Replication (LEPM-GO-FAR) is a project implemented by the Department of the Interior and Local Government (DILG), Liceo de Cagayan University through the Safer River, Life Saver Foundation, Inc. (SRLSF) and the City Government of Cagayan de Oro through the City Local Environment and Natural Resources (CLENRO).

The project is funded by the United Nations Development Program under its (UNDP-Habitad). The aim of which is to document the exemplary performance of the barangays of Lapasan, Gusa and Bugo all of Cagayan de Oro in the field of environmental planning and management. These barangays have proven that the smallest local government unit can effectively implement environmental planning and management with less support from its mother local government unit.

The project intends to replicate this exemplary practice in other barangays of Cagayan de Oro City by providing them the basic guide on how to implement effective environmental planning and management at their respective areas of concern. Hence, a replication manual is developed by the Safer River, Life Saver Foundation, Inc. The projects presented in this replication manual are Solid Waste Management and Coastal Resource Management.

The replication manual is envisioned to direct the users particularly the replicating local government unit what steps to undertake to effectively implement and sustain their project on Solid Waste Management and Coastal Resource Management at the barangay level. On the part of the DILG, this replication manual seeks to enhance the capacities of our field officers in providing appropriate technical assistance interventions to local government units in the area of environmental planning and management.

We are confident that with this replication manual, the best practices of the three barangays will proliferate in other the areas of Cagayan de Oro, Northern Mindanao and other regions for a healthy and clean environment.

AUSTERE A. PANADERO
Asst. Secretary for Policy Capacity Development,
International Partner & Field Operations



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OFFICE OF THE REGIONAL DIRECTOR

Message

I commend the laudable efforts of the Safer River, Life Saver Foundation, Incorporated of the Liceo de Cagayan University, Cagayan de Oro City, in successfully documenting the exemplary practices on Local Environmental Planning and Management (LEPM) of Barangays Lapasan, Gusa and Bugo, all of Cagayan de Oro City.

The development of this replication manual is another step forward in ensuring that local government units are given the appropriate tools as guide in enhancing their capabilities in the implementation of national and local laws.

The manual gives a detailed procedures in implementing Solid Waste Management, Coastal Resource Management at the barangay level and how the projects were sustained by the implementing barangays.

I congratulate also the City Local Environment and Natural Resources Office (CENRO) and DILG Regional Office Staff for a successful provision of technical guidance to the Safer River, Life Saver Foundation, Inc. in coming out with this replication manual.

Again, Congratulations.

QUIRINO M. LIBUNAO, CESO III
Regional Director



LICEO DE CAGAYAN UNIVERSITY
Rodolfo N. Pelaez Boulevard, Kauswagan
Cagayan de Oro City



OFFICE OF THE PRESIDENT

MESSAGE

The Liceo de Cagayan University of Cagayan de Oro City is very pleased and greatly honored to have contributed to the development of the modules in MASTER IN MANAGEMENT Major in ENVIRONMENTAL PLANNING AND MANAGEMENT (EPM) in the School of Graduates Studies and Good Practices in Local Governance promoting LEPM. I wish to acknowledge the contributions of the Safer River, Life Saver Foundation, Inc. and the School of Graduate Studies.

This component primarily focuses on the creation of a Center of EPM Studies in Mindanao that shall serve as the repository of knowledge on EPM Process and Projects in Mindanao. The Center is expected to facilitate organizing the Local Resource Institutes (LRIs) in Mindanao to share knowledge and technologies as well as design new tools, curricula, and projects concerning L-EPM. In addition, the Center shall closely coordinate with the Urban Leadership and Management Unit (ULMU) of Local Government Academy (LGA) that manages information on urban developments and concerns, including EPM processes.

In behalf of Liceo de Cagayan University, Safer River, Life Saver Foundation, Inc. the School of Graduate Studies. I commend and congratulate the Project Management Team of this endeavor for a job well done. Also, I express my thanks to the cooperating agencies, namely; the Department of Interior and Local Government through the Local Government Academy and the funding agency, the UN-HABITAT for all their support.

To all our partners and the Project Management Team, keep up the good work. Mabuhay!

A handwritten signature in black ink, appearing to read 'Rafaelita'.

DR. RAFAELITA PELAEZ-GOLEZ
President



Republic of the Philippines
City of Cagayan de Oro

OFFICE OF THE CITY MAYOR

MESSAGE

As the City of Cagayan de Oro scales new and greater heights on both domestic and international fronts, we cannot and must not lose ourselves in the heady milieu of higher altitudes. For with great progress comes the greater responsibility of maintaining the resources and circumstances that accommodates and supports our growth.

Recognizing and acknowledging this symbiosis, the City Government of Cagayan de Oro works hard – singularly and in partnerships – to protect the integrity and health of the environment that breeds, feeds – and at the same time benefits from – our city's advancement.

It is heartening to know that, although we do not flaunt our efforts, they are taken note of and honored, as in the selection of Barangays Bugo, Gusa, and Lapasan as Model Barangays in the implementation of solid waste and coastal resources management programs under the "Good Practices in Local Governance: Facility for Adaptation and Replication – Local Environmental Planning and Management (GOFAR-LEPM).

The Replication Manual that this project aims to produce through collaboration with the city government, UN Habitat, the Department of the Interior and Local Government (DILG), the Barangay Councils concerned, and Liceo de Cagayan University 's Safer River, Life Saver Foundation, Inc., will not only celebrate the efforts of everyone that has worked hard to achieve implementation success, but also ensure the success of future and further implementation efforts.

As those of us who went before boldly went where none had successfully gone before, so now we must hold up the light and show the way to those who resolutely follow, seeking to achieve the same balance.

VICENTE Y EMANO
City Mayor

ACKNOWLEDGEMENTS

The success of the Integrated Solid Waste Management Program of Barangay Gusa is largely attributed to the commitment and hard work of the projects implementers. With the law (RA 9003) and environmental concern in their collective consciousness, managing the barangay's wastes and creating a productive venue for the community dwellers are not only challenges but projections of a better future for the barangay.

In the writing of this manual, the author expresses her gratitude to the unfailing cooperation of the GUSA barangay council through the ISWM committee representatives in the persons of Barangay Kagawad Marlo Tabac and Ms. Teodora Carasco. Their hands-on approach since the very first parts of the process implementation up to its completion hastened the concretization of project results.

Invaluable input contributed by the L-EPM managers, namely, Mr. Edwin P. Dael, Ms. Rayna Lagman, and Mr. Roscoe Masiba is also highly appreciated. Theirs was the common striving to provide all the technical support for the project with their knowledge of the L-EPM process.

Also, the presence of Barangay Environment and Health Brigade (BEHB) president Ms. Antonieta Go during the series of interviews in the writing of this replication manual is most esteemed. It is with her exemplary leadership in the implementation of the garbage collection and segregation policies that pushed the project to its completion.

Barangay chairman Enrico Salcedo's support in the different courses of action proposed by the working group, his open mindset to the suggestions of his constituents in the ISWM committee, and his belief in what the projects can do for the barangay is also worth noting.

The stakeholders and partners to the project, and the concerned people of barangay Gusa are also thanked for their unwavering commitment to the ISWMP. Their faith to the greater impact of the projects for future generations is worth celebrating.

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Enrico D. Salcedo
Barangay Council Chairman/ISWM Committee Chair

Marlo L. Tabac
Barangay Councilor/ ISWM Committee Co-Chair

Committee on Education:

Rayna Lagman
Antonieta Go
Teodora Carasco
Melody Melarpez
Lolita Baconga
Paolo Candongo

Committee on Composting:

Edwin Dael
Efren Yagaho
Daniel Rodriguez
Cesar Belono

Committee on Agriculture

Roscoe Masiba
Priscillo Payos
Edwin Dael

Committee on Marketing

Caesar Belono
Margarita Beronto
Mary Jean Paje
Venie Baloyos
Luis Salucana
Gina Jabol
Fructouso Edusma
Emeliano dela Paz

Committee on Garbage Collection

Ernesto Ladia
Carmilo Caballero
Ramel Sayco
Eldie Estareja

FOREWORD

The implementation of the Integrated Solid Waste Management System Program in the pilot barangays of Lapasan, Gusa and Bugo in the City of Cagayan de Oro has been more than challenging and overwhelming. Proper waste disposal is a major contribution in dealing inevitable environmental issues. Promoting segregation at source will make ecological awareness climb to its peak.

The realization of this documentation will afford a hope that other municipalities and cities can reflect and replicate the implementation process. Not just as a community, but such consciousness will become part of each individual's personal values. After all there is only going to be one earth and it is everyone's responsibility to take care of it.

Dr. Rosalina S. Huerbana
Project Manager
GO-FAR/L-EPM Project

PREFACE

Assigned the challenge of documenting the Good Practices in Local Governance: Facility for Adaptation and Replication (GO-FAR), the Safer River Life Saver Foundation, Inc. (SRLSFI), takes pride in recording the exemplary practices of three Local Government Units (LGUs) of Cagayan de Oro City, namely, Gusa, Bugo, and Lapasan. As a private organization representing Liceo de Cagayan University's thrust towards environmental care and preservation, the SRLSF is partners with the Department of Interior and Local Government (DILG) and the City Government through the Local Environment Planning and Management Office (L-EPM). Its presence during the initial planning to the implementing stages of the various projects in the abovementioned LGUs therefore grant the SRLSFI credibility to put their experiences in writing.

This is a replication manual on the Integrated Solid Waste Management Project (ISWMP) of barangay Gusa. Their challenges and the steps through which they have overcome it are recorded herewith.

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ISWMP in a Nut Shell

A replication manual on one of the most note-worthy projects facilitated by the Cagayan de Oro City government through the Local Environment Planning and Management Project (LEPM) is a concretization of the Good Practices in Local Governance: Facility for Adaptation and Replication (GO-FAR) goal to provide other local government units the rudiments of successful environmental management techniques. This replication manual on the Gusa solid waste management projects covers the basics of the project in a synthesis.

In summary, one of three model barangays chosen for the LEPM projects, the local government of Gusa is exemplary in the successful implementation of its Integrated Solid Waste Management Program (ISWMP). Fore planned to alleviate the quality of life among its populace through clean environment and the utilization of organic waste generated within the area, the project is a concretization of RA 9003 or the Ecological Solid Waste Management Act of 2000.



THE HEAP IS TURNED

Gusa, along the East coast of Cagayan de Oro City, is flanked by the river Bigaan and the Macajalar Bay to its East and North respectively; barangay Lapasan lines it to the west and barangay Indahag to the south. Outstanding efforts of the project implementers converge in the Material Recovery Facility (MRF) situated in Sitio Dao, Purok 3 of the barangay. This 1,000 square meter lot is not only destination to the biodegradable refuse of the 19 clusters in four

demonstration puroks, namely puroks 6 and 7 and later puroks 4 and 5; it also houses a pot and plot garden for organically grown and marketable produce of vegetables and ornamental plants.

Instrumental to these achievements is the unwavering commitment of the project's primary stakeholders backed by faithful law obeisance. L-EPM trained organizers of the barangay attuned themselves to the immediate needs of their environs. Strategically, they linked the L-EPM project components to an already existent Barangay Self Sufficiency Program for Development (BSSPD) that also includes health and sanitation among its priorities. An educational tour to Marikina, Makati, the Senate, and Linamon also prepared the barangay organizers with workable information on management and governance. Part of their success formula is a strong advocacy by way of information, education, and communication (IEC). An intense information campaign ensued over the initial stage of the project implementation. Educated on the pros of waste segregation, the community was more than eager to do their share of segregating biodegradables from recyclables and residuals. Four-time violators of the RA 9003

were summoned to the barangay council and re-educated the basics of segregating. However, such a violation marks the offender a criminal record in his purok certification. Clearance from the violation is penalized at PhP300.00.

The barangay council initiated preparations for the ISWMP implementations through the Barangay Solid Waste Management Committee. With the community's participation, the concerted efforts of the Barangay Health and Environmental Brigade, the City Local Environment and Natural Resources Office (CLENRO), Provincial Environment and Natural Resources Office (PENRO), and Community Environment and Natural Resources Office (CENRO) the technical and financial assistance of the L-EPM, the bases were covered. No later than 2001, the implementers set up for their seven-fold methodology:

- identification of a collection schedule and transport system,
- introduction of SWM practices to four pilot puroks,
- selection of suitable location for an MRF
- selection of technically suitable and economically feasible composting method,
- organization of competent personnel to manage and maintain the composting process,
- utilization and distribution of compost, and
- recovery of recyclable and reusable materials.

In 1998, when the ISWM started, the barangay was recipient to the Environmental Management Bureau of the Department of Environment and Natural Resources (DENR) Certificate of Recognition as initiators of a community-based waste segregation and material recovery and composting activity in line with the implementation of the RA 9003 or the Ecological Solid Waste Management Act Of 2000. This and back to back Pachada Cagayan Awards in 1997 and 2000 by the city government are standing proofs to their achievements in the city's clean and green environment drive. More than a boost to their morale, these awards blazed the trail for more achievements in the future.

More importantly, the project has a more resounding impact to the community and the local government. A clear shift in the culture can be seen among the people. More and more are coming to an awareness of his responsibilities in keeping the environment litter free. With every implementation of the sanctioning ordinances against violators of the segregation law comes the social obligation to look after their own garbage and contribute to progress. The barangay council, through time also developed a concrete mechanism towards addressing environmental issues. An efficient working group has been identified to take charge on every aspect of the implementation. The consistent channeling system among the WG allowed for a systematic problem to solution route.

Over the four years that waste segregation is put to action in Gusa, the ISWMP has come full circle to achieving what it, in the first place, stands for-development. Both the community and the industries surrounding the area are participatory to the ISWMP implementation. The barangay council manifests

good governance in managing the MRF under the barangay Solid Waste Committee. Food security is achieved through urban agriculture using only organic fertilizer produced by the compost plant. Finally, the ISWMP generated income through the sale of compost and their vegetable products in an established supermarket in the city.

The Word on Segregation

This section aims to provide a profile of the project location, rationale, objectives, and results. This is particularly helpful for the replicator to discover applicability of the Gusa ISWMP in addressing his own locale's environmental management issues.

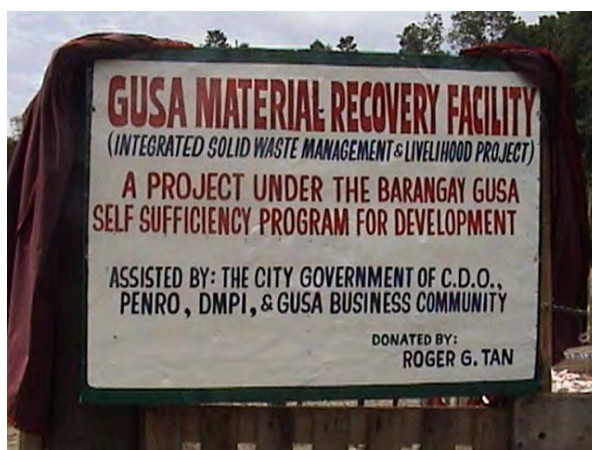
➤ *RA 9003: A Collective Response*

The Integrated Solid Waste Management Program (ISWMP) of Gusa is the barangay's response to RA 9003 or Ecological Solid Waste Management Act of 2000. Its mission is to provide a priority program focused on health and sanitation, livelihood, and peace and order to the community. It particularizes the poor and vulnerable group so that they can actively contribute, produce and practice a healthy lifestyle in a clean environment. On foresight, the stakeholders project a highly urbanized barangay of responsible and self-reliant people harnessing their potential for trade and commerce in a beautiful and clean environment.

➤ *The LGU: Profiled*

As one of Cagayan de Oro's most highly populated barangays, registering a total of 20, 124 persons, garbage collection was a set back to Gusa's plans as a thriving urban barangay. With the wide land area, a collection system that left much to be desired, and deficient know-how of the advantages of solid waste management, people dumped recklessly onto side walks, canals, creeks, and shorelines.

In 1998, the barangay council's Barangay Self-Sufficiency Program for Development (BSSPD) focused on the barangay's health and sanitation, peace and order, and livelihood. The BSSPD's early initiatives toward the problem involved solid waste management through segregation. An effective strategy which sustained the project was the clustering of households within the pilot puroks. An extension arm created specifically for the waste management concerns of the barangay; thus, the Barangay Environment and Health Brigade (BEHB) was created. Although



THE SOLUTION

was

On a broader level, the LGU of Gusa recognizes the urgent need to attain a practicable waste management program. Critical issues of environmental and political nature necessitate a system of disposal management that should benefit not only Gusa but a fast progressing city like Cagayan de Oro. These are the worthy causes of the project:

- the declining capacity of the city dumpsite,
- the increasing budget for citywide solid waste collection, and
- the formidable cost of developing a new sanitary landfill.

More than anything else, the ISWMP holds prime the quality of life among the urban population of barangay Gusa through clean environment and utilization of organic waste in pot/plot gardening. Their ongoing efforts are geared by the following objectives:

- Improve household segregation, separate collection and transport of waste from pilot puroks 4, 5, 6, and 7
- Produce high quality and cost-effective compost from barangay waste
- Utilize and market compost
- Transfer technology to project recipients

The Trail They Blazed

Situational and political prompts that led to the implementation of the projects on solid waste management by the LGU of Gusa, its initial to steps which eventually led to material results are recounted in the brief history below.

June 24, 2001, months after the RA 9003 was promulgated into law, saw the launching of the Solid Waste Management Program in Gusa. The projects within the program were incorporated with the Barangay Self Sufficiency Program for Development (BSSPD) under the Health and Sanitation Committee. It was the BSSPD organizers' initiative to organize 25 households into clusters within the demonstration puroks. This served the whole project well in terms of a more centralized advocacy. Technical and financial assistance were provided for by the L-EPM. In a month's time garbage bins, trisicads, and weighing scales were procured, pilot puroks chosen, and information dissemination strategies strengthened. Color-coded sacks as tools for segregation and the "reduce, reuse, and recycle" schemes were also introduced. It was also in these initial stages

that the cooperation of business establishments was brought in.



GUSA MRF RECYCLING CENTER

In 2002, the new administration created a new Barangay Solid Waste Management Committee. A

re-implementation of the briefly foregone projects called for the creation of the Barangay Health and Environmental Brigade (BHEB), a conglomerate of committed community dwellers who took to the responsibility of collecting recyclables and managing the Materials Recovery Facility (MRF) at Sitio Dao, Purok 3. Biodegradable refuse from the pilot puroks 6 and 7, and those from the expansion puroks 4 and 5 ended up at this MRF for further handling as compost.

First hand as support group to the project and community organizers were the Barangay Council and the L-EPM managers. Such close coordination between the Gusa LGU and the city government was also key to the successful implementation of the barangay's ISWMP.

The Big Garbage Pay-Off

The ISWMP completed four years of implementation with results that are as vivid as the objectives that they started out with. The accomplishment of these is a primary indicator of the project results.

- Improved household segregation, separate collection and transport of waste from pilot puroks 4, 5, 6, and 7.

In keeping with RA 9003, segregation at source was realized per household. Since the community was involved in the policy-making, keeping to the action plan and penalty system was unswerving. Separate collection and transportation of waste materials are achieved. The "No dump truck=no garbage outside the household" rule was strictly observed. Biodegradable waste collection is scheduled on Mondays and Fridays only while recyclables and residuals are collected from the puroks on separate dates.

- Produced, utilized, and marketed compost

In line with the implementers' vision of progress, income was generated for the cooperative handling the MRF. Five hundred sacks of compost were sold during a recent open house. The rest of which fertilizes the nine 1X20 sq. m beds of pechay, eggplants and kangkong. Other than the vegetable produce, the community organizers also came up with a "Kabulakan Festival" to showcase ornamental flora fertilized by the compost. The following figures mark their 2005 income:

Compost from Biodegradables- PhP 27, 000.00 in 5 months
Recyclables-PhP 3, 000 every 45 days
Vegetables from plot garden-PhP 28, 000 in 8 months

- Enhanced relations between the LGU and the community

The LEPM process of identification, prioritization of relevant issues, participatory planning and implementation mobilized the direct beneficiaries within and around the area including the industries, and local and national

government resources for project implementation and sustainability. While financial assistance was granted by the United Nations Development Program (UNDP), the DENR through the Provincial Environment and Natural Resources Office (PENRO) provided material assistance and the L-EPM, technical assistance.

Moreover, since the project was backed up by a fully supportive LGU, positive results are at ready hand. Manpower, policy support like ordinances and directives, implementation mechanics, and budget allocations are substantial manifestations of such support. The multifarious activities required to maintain the MRF are also assured the same level of support in case of change of administration. The Gusa Environmental Health Brigade Multi-Purpose Cooperative (GEHBMUCO), created by the barangay council under the direct supervision of the Barangay Solid Waste Management serves as a contingency plan for the project's implementation and maintenance.

The Map-Worthy Road

City level activities preceded the implementation of the ISWMP.

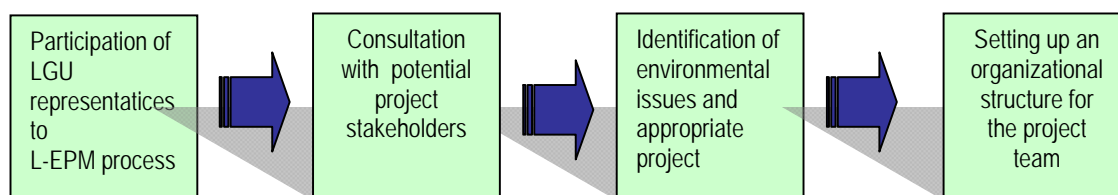


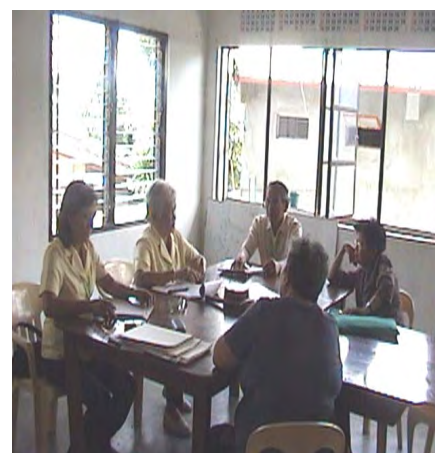
Figure 1. Preliminary Steps to the ISWMP

The working group and stakeholders, familiar with strategies and techniques provided for by the L-EPM, went through a five-fold agenda to meet the project goals. The following are key implementation steps to the ISWMP.

I. Mission Preparations

- *Identify the barangay's environmental concerns in a meeting with L-EPM and other prospect stakeholders.*

In 1999, four community organizers with the LGU of Gusa participated in the seminar workshop organized by the L-EPM unit under the city government in partnership with the CLENRO as future stakeholders of the EPM methodology, the organizers were given an



COMMUNITY ORGANIZERS ON A MISSION

orientation briefing. Issues and concerns were identified in their barangay.

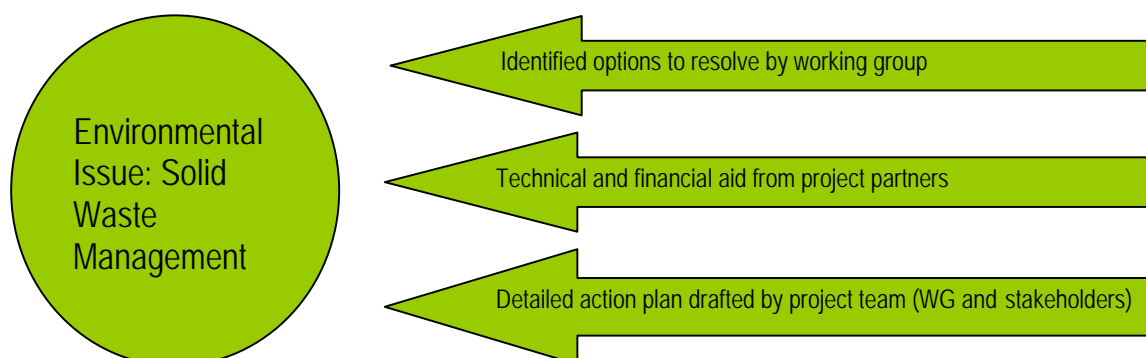


Figure 2. Immediate Actions Taken on the Garbage Problem

- *Adapt the identified project to an existing barangay development program.*

The L-EPM was taken under the wing of the existing Barangay Self Sufficiency program. Under the BSSPD, they clustered 25 households in the puroks for a more effective IEC.

- *Identify strategies and courses of action for the project.*

The barangay council and the identified core group of organizers held a cluster session for an action and strategy planning on the ISWMP.

II. Information, Education and Communication

- *Schedule the clusters in the demonstration area for orientation workshops on segregation.*

IEC was strengthened through a series of orientation seminars was scheduled for the 18 puroks of Gusa. An orientation for one purok was held per week on solid waste management. Simultaneously, workshops on segregation were given to clustered households.

- *Intensify recordas within the demonstration area.*

The barangay council organized the community organizers for a house to house campaign.

- *Train garbage collectors the proper collection protocol.*

A separate training session for garbage pickers on proper collection was done by the barangay council.



SPREADING THE WORD ON
SOLID WASTE
MANAGEMENT

III. Equipment Acquisition

- *Tap partner agencies for financial and material support.*

The L-EPM coordinated with the UNDP for funds for the purchase of start-up materials. Funds were turned over to the barangay council and were used to purchase 10 weighing scales, 10 units of triscad, 5000 pieces of garbage sacks, and 10 garbage bins. Puroks 6 and 7 were chosen as pilot demonstration areas

IV. Start-up activities

- *Establish a collection and transport system.*

Collection and transport system was done by the city government in cooperation with the L-EPM. Sacks were distributed to the households in the pilot puroks. A reorientation on solid waste management was conducted. Separate collection and transport was introduced to the pilot puroks upon coordination with the city government of Cagayan de Oro, the business community, the puroks and the BEHB. Spearheaded by the BEHB, a recycling center was created at purok 6. All recyclables were then sold to the city landfill. The BEHB decided to sell the recyclables themselves. 10% of the sale proceeded to the association. The rest of the proceeds the BEHB volunteers divided among themselves.

V. R.A. 9003 Ecological Solid Waste Act of 2000 Implementation Steps

- *Expand purok areas, widen scope of recordas, and schedule collection of garbage.*



MRF MANAGERS-SETTING THINGS ASIDE

Pilot puroks were expanded to include puroks 4 and 5. Recoredas were intensified with double the effort the organizers started with. As of October 2005, IEC has already been conducted on 13 of 18 puroks in Gusa. Collection of recyclables, residuals, and biodegradable wastes was scheduled on separate days. This schedule is flexible and dependent on the volume of accumulated recyclable wastes in the puroks. However, biodegradable wastes are collected on Mondays and Fridays only.

➤ *Strictly implement waste segregation.*

Segregation at source was strictly implemented. Wastes, upon collection, are routinely checked by the trained collectors to make sure that biodegradable wastes do not get mixed with non biodegradable ones and vice versa.

➤ *Pass an ordinance to protect project cause and objectives.*

The Gusa barangay council authored and passed Ordinance No. 2005-02-01 or the Improved and Attractive Gusa Legislation Program-Garbage Fee Ordinance of 2005 for the collection of Php10.00 monthly garbage fee or Php 120.00 annual garbage fee from households and business establishments. This was approved by the city government and has since been executed the beginning of 2006.

➤ *Strictly enforce penalty system for violators.*

A penalty system was imposed to violators. Upon first offense, a letter of notice is sent to call the violator's attention to the law violated. At a second and third offense, a citation identifies the household member who failed to segregate. It is upon the fourth offense that the violator is summoned and reoriented on waste segregation. However, such a violation mars his barangay certification with a RA 9003 violation record. Such is cleared only upon paying a Php 300.00 fee. As of this writing, 84 household members and 1 business establishment has been summoned to the council.



RE-EDUCATION FOR VIOLATORS

➤ *Establish a Materials Recovery Facility (MRF)*

The barangay council selected a suitable location for the MRF. A 1,000 square meter lot at Dao, Purok 3 was rented at PhP 500.00 a month by the barangay council. To equip the MRF, a "pledging session" was held at

the barangay hall. Resources were pooled in by the BEHB including the PhP 2,000 by the barangay council. The MRF was launched on July 19, 2004. Representatives from the city government, the PENRO, CENRO, and CLENRO attended the affair. A quarter of the 1,000 square meter lot held 9 beds of vegetable. The Gusa Training and Information Center inside the MRF was opened shortly after the launching. With the help of the L-EPM managers, a MOA was forged between the Gusa Barangay Council and the Rotary Club West Valley of Carmen for the construction of the said building. The City Agriculture Office was tapped for a technically suitable and economically feasible composting method. Chemical testing was done to test the ph /acidity of compost.

➤ *Maintain quality of compost in the compost plant.*

Maturity of the compost was regularly determined through compost temperature, compost pH and seedling germination tests. Soil conditioner was produced from the biodegradable waste in the compost heap of the communal garden where all the collected biodegradable wastes were placed for composting. The large volume of compost produced in the MRF called for certain adjustments in composting methods. Before, the compost was turned using shovels. Since the increased bulk of compost, the barangay's buck hoe was used.



READY, SET, GONE AHEAD-LAUNCHING THE MRF

➤ *Utilize compost and garden produce*

To utilize the large volume of compost soil, the community organizers formed the "Gusa Kabulakan Association". Through them, flowers were fertilized with the compost produced in the MRF garden. In the last barangay fiesta, the "Kabulakan Festival" became highlight of the celebrations. Sacks of compost were sold during the recent open house at the MRF. Pechay, kangkong, eggplants and other vegetable produce supply an established supermarket in the city.

➤ *Monitor and evaluate the compost heap.*

The biodegradable wastes for composting is regularly turned by buck hoe to check for presence of residuals. The BEHB coordinator does a routine check on household clusters to ensure that segregation is done properly. Aided by the garbage collectors, household members who do not observe proper methods are identified by the BEHB. Collectors are

instructed not to collect the garbage of those recognized households until they would have corrected their methods.

Down the Road to an Attractive Gusa

Indeed the ISWMP of Gusa had an appreciable take-off and has since become a steady source of benefits especially for the people in the demonstration areas. However, the project implementers also had their share of difficulties throughout the project. These however, were not taken as stumbling blocks but footholds into achieving what the project stood for the people.

➤ **LESSONS LEARNED AND POINTS WELL-TAKEN**



Figure 3. Elements of Survival: Core Values of a Successful ISWMP

Despite the project funding from the UNDP the organizers experienced financial challenges. For them it was difficult to keep up with the cost of MRF maintenance without the financial allocation from the barangay. Plans to expand the project demo areas to other puroks were nearly impossible. For these challenges, they set up “pledging sessions” and solicited assistance from the community, business establishments, and the city government. If necessity calls, the organizers also put in their own resources to keep the project afloat.

Lack of ecological concern among the community was another one of the implementers’ challenges. However strict the sanction system was executed, it was proven inevitable for some people to be careless about what they throw and where they throw it. At the height of the project implementation in 2002, 70% of one purok was still resistant to the segregation drive. It was then the initiative of the group to strengthen their information education and communication of solid waste management. The need to spread the word pushed the project beyond the pilot purok perimeters but also to nine more puroks in the community.



CHEMICAL-FREE VEGETABLES

Through the years, they also realized the importance of launching a fully operative MRF

before pushing for waste segregation. The latter would have been useless if segregated materials still end up in one heap at the city dump. The MRF also encouraged the community to segregate since material evidence through the garden produce and the compost created off the biodegradable wastes assure them that their efforts are well worth it.

Nonetheless, the project core group is thankful for the support of their barangay captain in all of their activities. It was he who vested the project leaders the authority to carry out their plans and activities for as long as they were beneficial to the community. Since he is one with the people's commitment for a better life through a clean environment, all adversities the people in the project experience seem trivial. Thus, trust and commitment are values that go into the making of a successful solid waste management project.

It is noteworthy how the spirit of volunteerism is present among the community, the implementing agencies, and most specially the project organizers. Their involvement in every detail of the project proved vital to the realization of the project objectives. The choice of people to implement the project is an essential part of the barangay council decision making. For this, the Gusa LGU is exemplary.

➤ *FROM EFFICIENCY TO EFFECTIVENESS*

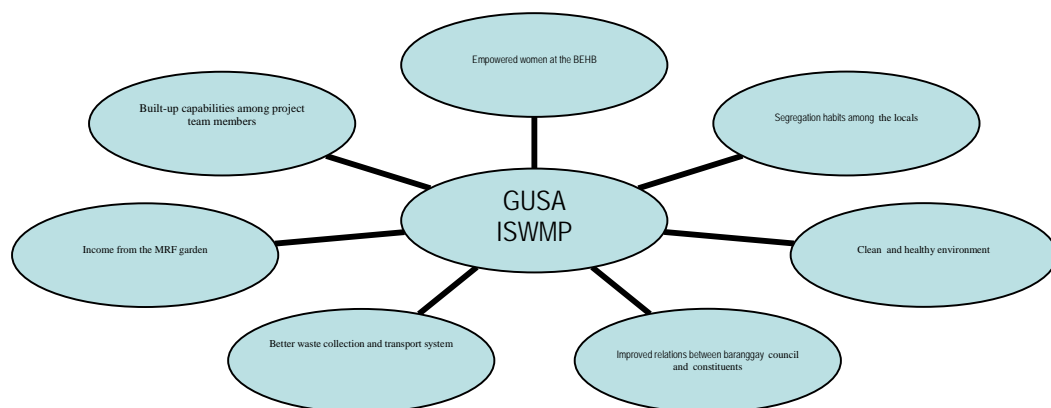


Figure 4. Fruits of their Labor: Visible Results of the ISWMP

Moreover, beyond the LGU's immediate goals to better their life through a healthy environment, the ISWMP of Gusa has far-reaching effects to the city of Cagayan de Oro. The project is a big help in decreasing the amount of urban generated waste. On the other hand, while alleviating the city dumpsite situation, the vegetable and flower garden in their MRF increased the community's productivity. The BEHB earn from the recyclables and the LGU from the MRF and allotment garden while the barangay Gusa in general enjoy a clean environment.

The ISWMP in the context of the L-EPM also improved the relationships between the LGU and the community. Communication was provided avenue through the BEHB and the community organizers who represent the barangay council. Information drives as part of their IEC allowed the council a more hands-on approach to their community. The project also created linkages between and among the barangay council, the government and non government agencies as well as the business sector.



GUSA KABULAKAN FESTIVAL FAIRY

Over the past years since the ISWMP official implementation, the project core group learned the value of self sufficiency. As was the BSSPD motto, *"Kung dili karun kanus-a man? Kung dili kita kinsa man?"* (If not now, when? If not us, who?) It was this urge to improve the larger community's quality of life that followed them through their goals despite the problems encountered. They relied on their own initiatives in overcoming challenges.

Moreover, a key activity that realized segregation at source was the clustering of households per purok. Each cluster of 25 households are organized with its own set of officers. Implementing the policies and pursuing the ordinances were made certain even in a large barangay as Gusa because cluster officers managed their immediate vicinity.

On hindsight, a similar project on solid waste management was proven beneficial and lucrative in the past. With reference to barangay Linamon's Basura Atras Linamon Abante sa Kalamboan (BALAK) project, it was standard in terms of 1.) teamwork LGU officials, barangay officials, and employees, 2.) strong political will of the municipal mayor, and 3.) IEC or project advocacy. Similarly, the Gusa ISWMP showed excellence in the aspects of leadership, teamwork, and information dissemination-all of which are highly recommended values for replication.

Summarily, the ISWMP of Gusa is exemplary in their effective use of the IEC to earn the community's approval and support of the project. The success of their MRF and allotment garden is also largely attributed to the firm implementation of their policies regarding segregation and collection. Only with the community's appreciation of the advantages of these policies and their understanding of the project goals and its implications on environment and living conditions can the project be implemented properly.

Appendix A

Sample flyer

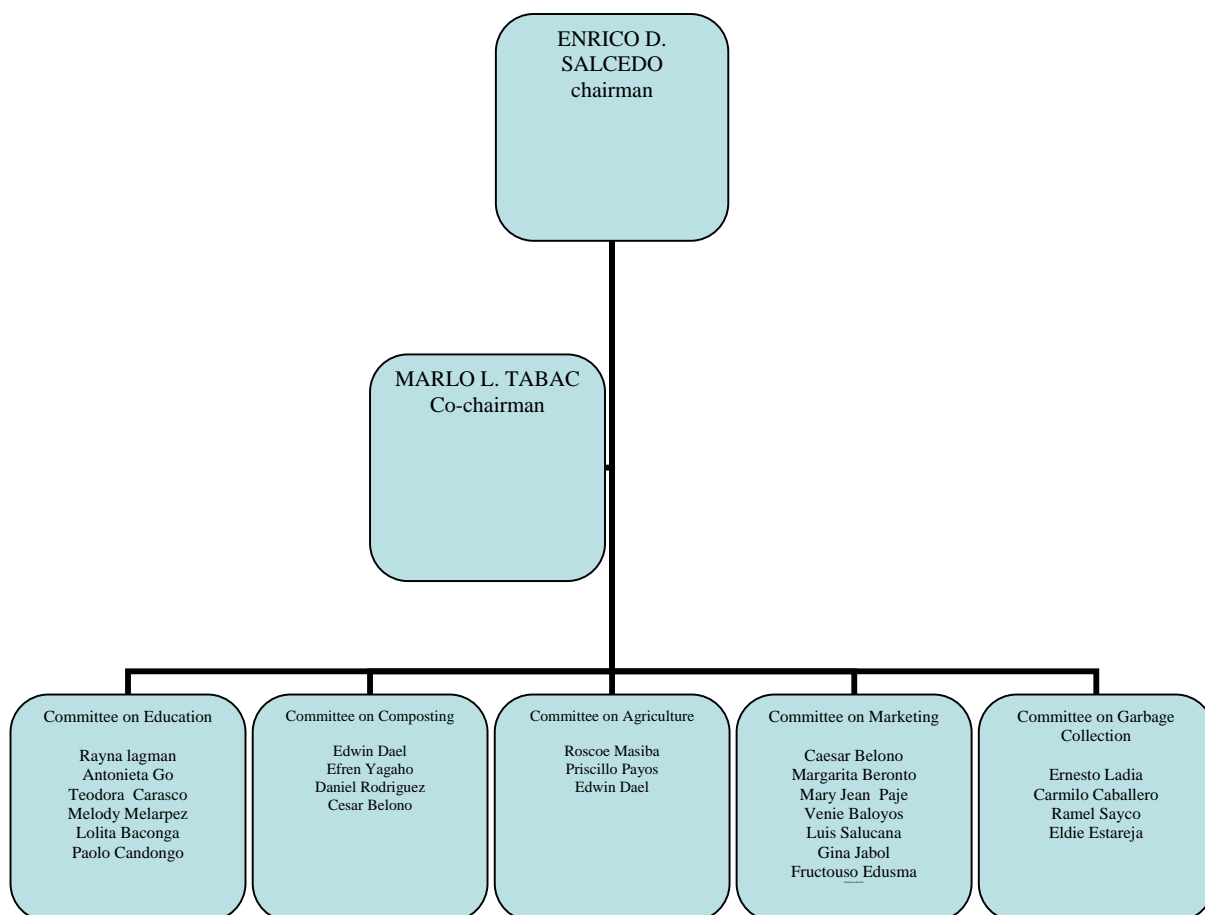
RA 9003
Integrated Solid Waste Management

BASURA

Amomahon, Palanggaon
Mag-segregate!!!

1. MALATA (biodegradable)
 - Pan-os nga pagkaon
 - Mga dahon, sanga sa kahoy, bulak, gamut
 - Mga hinugasan ug tinay sa isda
 - Panit sa prutas o utanon
 - Alukabhang sa itlog o kinhason
 - Hugaw sa hayop
2. MAHIMONG I-RECYCLE O GAMITON PAG-USAB (Recyclables/Reusable)
 - Papel o karton
 - Puthaw
 - Botelya
 - Ceramics nga bulak
 - Lata o tin cans
 - Tetrapacks
 - Plastic containers
 - Sachets, aluminum foil packaging
3. WALA NAY GAMIT O WALAY PULOS (Residuals)
 - Baterya
 - Sanitary napkins o diapers
 - Panaptong hugaw o trapo
 - Bulb
 - Mga daot nga appliances
 - Spray canisters
 - Mga lata sa pintal, insecticide, hilo, etc.
 - Makahilo nga basura

Appendix B

Gusa ISWMP Organizational Chart

Appendix C

Detailed Action Plan for ISWMP 2005

ACTIVITIES	TARGET AREA	DATE/TIME	PARTICIPANTS	PERSONS RESPONSIBLE
Orientation R.A. 9003	Purok 4A Cluster Diamond	Aug. 9, 2005 7:00 PM	Purok President, officials, cluster president, officials, and members	Brgy. Chairman Enrico D. Salcedo
	Purok 4A Cluster Malinawun and Assylum	Aug. 11, 2005 7:00 PM		Kag. Marlo Tabac, ISWM Co-Chairman
	Purok 4a Cluster Intrada and Euprobia	Aug 12, 2005 7:00 PM		Brgy. Kagawads Antonieta Go, Community Organizer
	Purok 4a Cluster Manga and Mizpah	Aug. 18, 2005 7:00 PM		Rayna Lagman Edwin dael, City Support Staff
	Purok 4a Cluster Ruby	Aug 23, 2005 7:00 PM		Teodora Carasco, Asst. Secretary
	Purok 4c	Sep.1, 2005 7:00 PM		Penita Constantino, CO
	Purok 4b Sto. Nino	Sep. 6, 2005 7:00 PM		Caesar Belono, BEHB president
	Purok 4B	Sep. 8, 2005 7:00 PM		Paolo candongo, BEHB member
	Purok 3A	Sep. 13, 15, 22, 26, and 28, 2005		
	Purok 3	Oct. 4, 6, 11, 13, 17, and 20, 2005		

		7:00 PM		
Planning	ISWM Office, Brgy. Hall	Nov. 10, 2005 8:00 AM	Co-chair ISWM, City Support Staff, CO, BEHB President	Co-chair ISWM, City Support Staff, CO, BEHB President
Plan presentation	Brgy. Chairman's office, Brgy Hall	Nov. 22, 2005 8:00 AM	Co-chair ISWM, City Support Staff, CO, BEHB President	Brgy. Chairman, council members, brgy. Organizers
Meeting	ISWM Office	Nov. 28, 2005 4:00 AM	Driver and Garbage Collector	Co-Chair ISWM, City Support Staff, CO, BEHB president
Recorda	Whole Brgy. Gusa	Jan. 4, 10, and 13, 2006 8:00 AM		Edwin Dael Antonieta Go

Appendix D

Barangay Self Sufficiency Program for Development
Work Plan for Purok 4, 5, 6, and 7

Activities	Target Area	Time Frame	Participants	Responsible Persons
Garbage Collection and Waste Segregation Consultations: 1. Recoreda on RA 9003 2. Health and Sanitation 3. Peace and Order 4. Livelihood	Purok 4, 5, 6, and 7	Jan 10/05, 8:00 am	Purok president and cluster presidents, officers and members	BEHB president and members, Cmmunity organizers
	Purok 4, 5, 6, and 7	Jan 11/ 05, 8:00 am		BEHB president and members, Cmmunity organizers
	Purok 4 Centro, Cluster Amber	Jan 12/05, 7:00 pm		Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
	Purok 4, 5, 6, and 7	Jan 12/05, 8:30 am		Antonietta Go Kag. Perry Abrio Comm. Chair Health and San. TB Task Force co-chairman Kag. Joey Deleste Kag. Emmanuel Beja Chief tanod

Orientation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 4A	Jan 1/05, 7:00 pm	Purok President, officers and members	Kag. Rudy Baltazar Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation	Purok 4, 5, 6, and 7	Jan 14/ 05, 8:00 am		BEHB President and members/CO
	Purok 4 Centro Cluster Diamond	Jan 14/05, 7:00 pm	Purok and cluster presidents, officers, and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 4 Centro Cluster Sampaguita	Jan 15/05, 7:00 pm	Purok and cluster presidents, officers, and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation	Purok 4, 5, 6, and 7	Jan 17/05, 8:00 am		BEHB president and members, CO
Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 5 Cluster Baybay	Jan 18/05, 7:00 pm	Purok and cluster presidents, officers, and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
	Purok 4, 5, 6, and 7	Jan 19/ 05, 8:00 am		BEHB president and

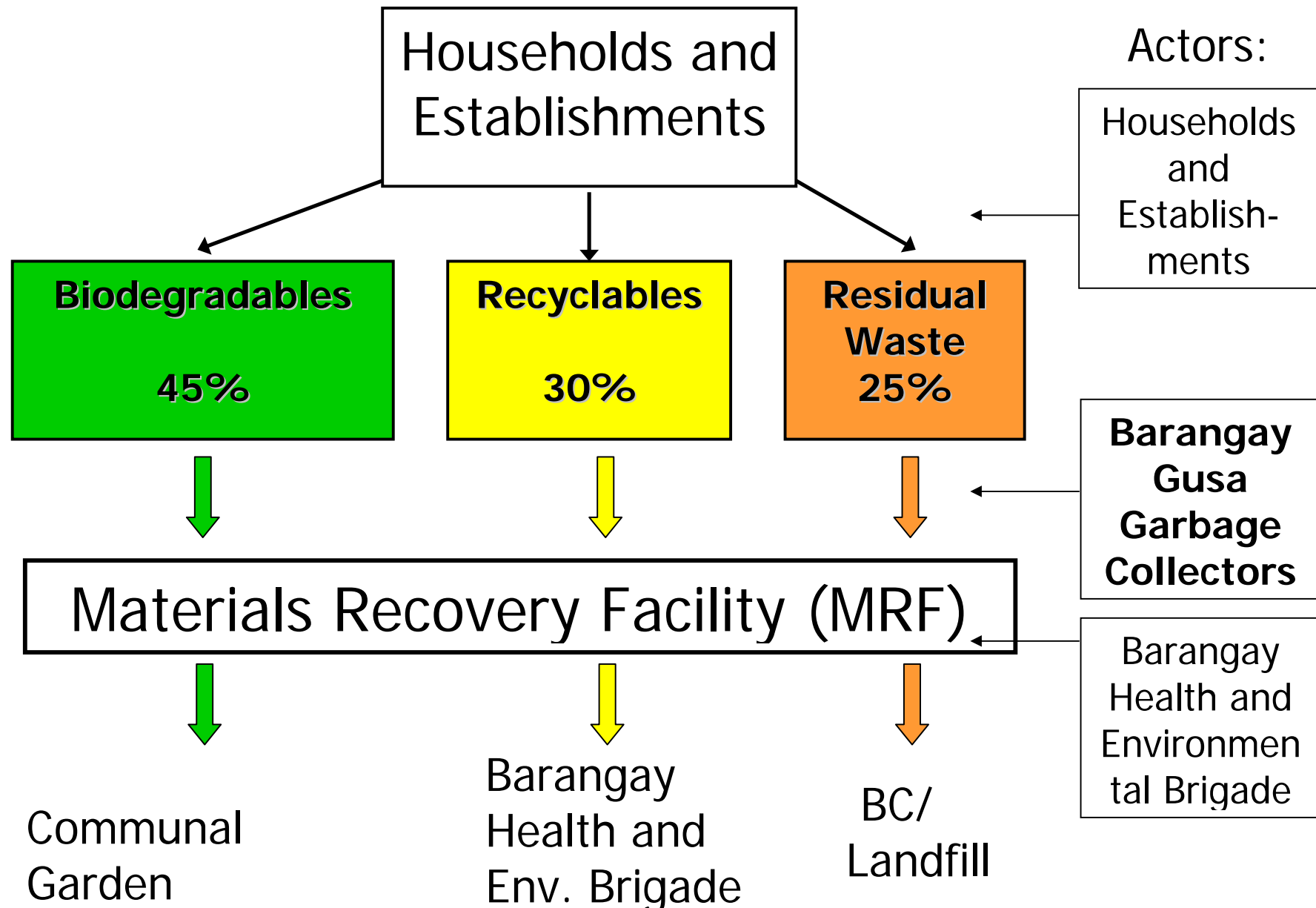
Waste Segregation Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 5 Cluster Narra and Yellow Bell	Jan 20/ 05, 7:00 pm	Purok and cluster presidents, officers, and members	members, CO Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation Orientation: 1. health and sanitation, 2. peace and order 3. livelihood	Purok 4, 5, 6, and 7 Purok 4A	Jan 21/05 Jan 21/05, 7:00 pm	Purok and cluster presidents, officers, and members	BEHB president and members Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 4, 5, 6, and 7 Purok 5 Cluster Molave and star apple	Jan 24/05, 8:00 am Jan 25/05, 7:00 pm	Purok and cluster presidents, officers, and members	BEHB president and members Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Garbage Collection	Purok 4, 5, 6, and 7	Jan 26/05, 8:00 am		BEHB president and members

Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 5 Cluster Anahaw	Jan 27/05, 7:00 pm	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation	Purok 4, 5, 6, and 7	Jan 28/04, 8:00 am		BEHB president and members
Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 5 cluster Guiho	Jan 29/05, 7:00 pm	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Garbage Collection	Purok 4, 5, 6, and 7	Jan 31/05, 8:00 am		BEHB president and members
Recorida	Purok 4, 5, 6, and 7	Jan 31, 8:00 am		BEHB president and members
Consultation: 1. health and sanitation 2. peace and order 3. livelihood	Purok 6 cluster Talisay	Feb 1/05, 7:00 pm	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation	Purok 4, 5, 6, and 7	Feb 2/05, 8:00 am		BEHB president and members

<p>Consultation:</p> <ol style="list-style-type: none"> 1. health and sanitation 2. peace and order 3. livelihood 	Purok 6 cluster Santol and Narra	Feb 3/05, 7:00 pm	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Garbage Collection	Purok 4, 5, 6, and 7	Feb 4/05, 8:00 am		BEHB president and members
<p>Consultation:</p> <ol style="list-style-type: none"> 1. health and sanitation 2. peace and order 3. livelihood 	Purok 7 Cluster Charity and Dove	Feb 5/05, 7:00 pm	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB
Waste Segregation	Purok 4, 5, 6, and 7	Feb 7/05, 8:00 am		BEHB president and members
<p>Orientation:</p> <ol style="list-style-type: none"> 1. health and sanitation 2. peace and order 3. livelihood 	Purok 4A	Feb 14/05	Purok and cluster presidents, officers and members	Brgy. Chairman, Kagawad Abrio, all kagawads, City support staff, CO, BEHB

ISWM SYSTEM:

(PILOT PUROK LEVEL)



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