Solid Waste Management Made Easy

A Fieldbook on Implementing
a Community-Based Ecological
Solid Waste Management Programme

Solid Waste Management Made Easy

*A Fieldbook on Implementing
a Community-Based Ecological
Solid Waste Management Programme*

Contents

Message

The country should be safeguarded against problems brought about by environmental degradation. For years, Filipinos have fallen short of the discipline to preserve and protect the environment. The focus on economic growth has led us to take environmental management for granted.

Solid waste became the most visible environmental problem in the country, and has remained so for years. In 2000, an estimated 10.67 million tons of garbage were generated and distributed across regions, with a majority of the waste coming from Metro Manila. Garbage has filled the metropolis, with every Filipino producing an estimated half a kilo of waste per day. Worse, this generation rate is expected to double by 2010 if left unabated.

Recognizing the need to address this environmental and social menace, the Department of Environment and Natural Resources has prioritized proper solid waste management in its 12-point agenda. The agenda includes implementing the proper closure and rehabilitation of dumpsites nationwide; developing sanitary landfills and safe disposal systems; promoting recycling and waste recovery; and providing guidance and technical assistance in waste management strategies and options to all local government units, through the National Solid Waste Management Commission.

It is a privilege for the Department to have partners in each sector of society – the private sector, the academe, non-government organizations, religious organizations, civic groups, and the international development community.

This fieldbook, *Ecological Solid Waste Management Made Easy*, a simplified, step-by-step guide in implementing solid waste management in homes and communities, is a fruit of the collaboration of these sectors. It is made possible through the generosity of the United Nations Development Programme, through its Community-Based Ecological Solid Waste Management Programme in the Philippines.

May this fieldbook serve as your quick reference to proper solid waste management. Together, let us do more than care; let us all help save the environment, for us today, and for the future generations of Filipinos.

SECRETARY ANGELO T. REYES
Secretary, DENR and
Chairman, National Solid Waste
Management Commission

2

Message

PROTECTING our environment and natural resources from the hazards caused by improper municipal solid waste management has been a continuing struggle for every Filipino. We are both victim and culprit to the country's garbage problem and, regardless of our stature in society, we all must take part and do our share.

The enactment of Republic Act No. 9003, or the Ecological Solid Waste Management Act, paved the way for a shift from indiscriminate waste disposal to institutionalized proper solid waste management at every household and community. By requiring the segregation of solid waste at source, the law educates every son and daughter the basics of proper environmental management in the hope that, as they grow older, the environmental consciousness may be brought into their school, business, and place of work. Compliance with other environmental standards on wastewater, air emissions, medical and hazardous wastes would no longer be difficult to comprehend and can easily be made part of the day-to-day practice of every business and industry in the country.

The law does not stop there. Waste minimization is attained through "cash from trash" and material recovery programs that broke recyclables from a monopoly of junkshops to a resource opportunity for each household or community. Open dumpsites are being closed and rehabilitated. Local government units, by themselves or in clusters, are building engineered landfills or are availing of technologies to manage their residual wastes.

Through its Community-Based Ecological Solid Waste Management Programme in the Philippines, the United Nations Development Programme (UNDP) has become a key partner of the National Solid Waste Management Commission (NSWMC) and the Department of Environment and Natural Resources (DENR). Ten pilot areas in Metro Manila were set up and now serve as models on segregation-at-source and material recovery systems for other communities in the Philippines to follow.

We hope you could make full use of this fieldbook, *Ecological Solid Waste Management Made Easy*. This fieldbook will provide every home, office, and local government unit a do-it-yourself guide to implementing ecological solid waste management in our communities.

ATTY. ZOILO L. ANDIN, JR.
Executive Director
National Solid Waste Management Commission Secretariat

Overview

IF you happen to pick up a copy and start reading this fieldbook, you are about to take the next step to making solid waste management a way of life.

This fieldbook is intended for those who have already read the handbook, *Solid Waste Management Made Easy: A Do-It-Yourself Guide to a Community-based Ecological Solid Wastement Management Programme*. This companion fieldbook is intended for those who are seriously determined to follow the letter of the law (Republic Act 9003, the Ecological Solid Waste Management Act of 2000) and are in a position to carry out changes in the community. This fieldbook contains ten training modules on running your own ecological solid waste management program.

Solid waste management is not just the responsibility of the government or our top local leaders. We are all in a position to make a difference – starting in our own households, in our barangays, in our communities in general. By implementing these training workshops, we could be making the first step in saving, not just the environment, but a lot of people's lives in our community as well.

We invite you to read this fieldbook and cascade the workshop lessons with the other members of the community.

4

How to conduct a
SOLID WASTE MANAGEMENT
COMMUNITY PLANNING WORKSHOP

I. WORKSHOP RATIONALE

The community, through its Barangay Council Solid Waste Management Committee, identified Core Group and key leaders, and block/street/cluster leaders. They must have already conducted data gathering, area profiling and small group validation, social analysis and planning sessions. This is to get a clear picture of the community's waste management system before holding a community planning workshop.

The workshop serves as the culmination of a series of step-by-step activities, the result of which is a plan for a solid waste management system that is appropriate, affordable , ecological and most of all, acceptable to all sectors. The evolving plan represents the analysis of the situation and the specific answer to identified problems from the points of view of the stakeholders.

5

II. GENERAL WORKSHOP OBJECTIVE

To come up with an integrated barangay ecological solid waste management plan, taking into consideration the environmental context of the area and harnessing the human and material resources of the community.

III. SPECIFIC OBJECTIVES

At the end of the one-day workshop, the participants should be able to:

■ Describe and analyze the current solid waste management situation in the context of the ecological, social, economic, political and cultural aspects of the community and relate this to the macro levels;

■ Identify community needs, issues and problems related to solid waste management that require interventions or solutions;

■ Draw up a waste management vision, mission and goals for the barangay;

- Articulate the various strategies, programs, structures and mechanisms needed to reach desired vision and accomplish identified mission and goals;

- Identify and define the roles of the various stakeholders.

V. DURATION
Eight hours

V. PARTICIPANTS
Expected participants are the following:
- members of the Barangay Council
- Solid Waste Management Committee
- Sangguniang Kabataan
- expanded Core Group members
- key leaders of NGOs
- barangay-based associations
- street, block or cluster leaders
- LGU and government line agency representatives

Ideally all streets, clusters or blocks in the community should be represented in the workshop.

VI. METHODOLOGY
Learning will be facilitated with the use of vartious training methodologies such as:

- Presentation using audio-visual aids
- Small Group Discussion and Presentation/Plenary Sessions
- Workshop method
- Structured learning experiences (SLE) or group dynamics

VII. CONTENT OUTLINE

Part 1: The Community Solid Waste Management Scenario
The Waste Management Situation
A. State of Waste Management in the Barangay
   (from the point of view of participants)
B. Results of the Perception Survey
C. Secondary Information

Solid Waste Management Issue identification and Analysis
(Workshop Group – Problem Tree Analysis)
A. Cause and Effect
B. Contributing Factors

Part 2: The Community's Aspirations and Goals
(Through a Structured Learning Exercise – scenario building)
A. Vision of Society
B. Mission to Achieve Vision
C. Goals – Concrete Improvements Aspired for

Part 3: The Way Towards the Achievement of Goals
(Through The Small Group Workshops)
A. Strategies
B. Programs and Components
C. Systems/Mechanisms
D. Structures – People
E. Activities

7

Part 4: Who Are The Major Stakeholders and Their Role in The Plan

Module 2

VISION-MISSION-GOALS FORMULATION
(Objective Tree Analysis)

I. OBJECTIVES:

- For participants to be able to articulate their preferences and hopes about the future (vision) in the context of solid waste management;
- For participants to be able to produce concrete scenarios of the changes they want in their community (goals);
- To be able to draft a mission statement to summarize what participants need to do in order to attain the goals they set.
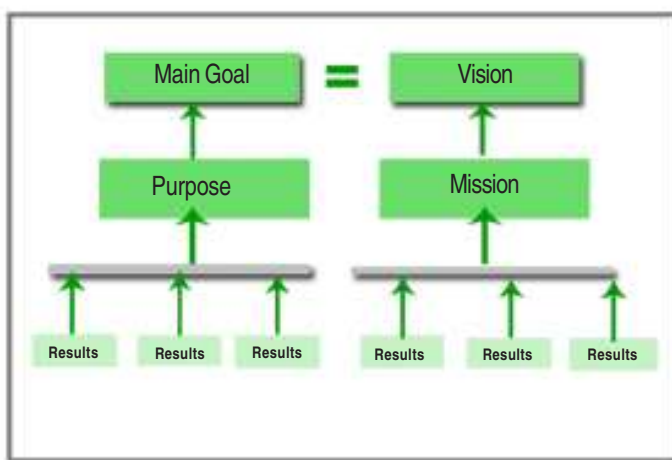
II. SESSION GUIDE:

8

Methodology:
Objective Tree Analysis

- The Objective Tree (OT) builds on the Problem Tree. Once the problems are identified, the OT helps the groups think systematically about the solutions to these problems.

- Discussion per group shall be guided by a facilitator

- The **Problems Situation** will now be the single desired scenario – the vision (or strategic goal for SWM).

- The **Causes** will now be what the community will do, how to go about attaining the vision and goals – the mission.

- The **Contributing Factors** will now be the concrete verifiable changes desired – the specific goals (objectives).

For the VISION
- Let participants list on idea cards the opposite scenario they wish for their barangay (based on the problem tree); additional adjectives may be used.
- Clarify each and assist them to come up with a single desired scenario (or summary statement a tentative vision or strategic goal statement) or their community that is acceptable to all.

For GOALS
- Let them list the opposites of the contributory factors of the problem tree.
- Rephrase them into concrete desired and verifiable changes in the community.
- The facilitator, with help from the participants, will classify related goals into clusters, if needed.

For the MISSION
- Ask the participants what they must do to attain the vision and the desired changes through a single general statement: "Barangay ____shall____ through ____."

Synthesis
VISION
- Short input on the vision: something aspired for, not necessarily realizable during one's lifetime nor in a project timelife: a bigger picture of what we want; realizable not by a single mission or programs, but a combination of more than one.

GOALS
- Summary and input: goals are the concrete and verifiable manifestations of the vision we aspire for. This is the basis of the concrete initiative of the people concerned.

■ Facilitator refers back to the problem/issue. How exactly the barangay will attain the vision, what they have to do.

WHAT IS EFFECTIVE FEEDBACK?

DEFINITION

FEEDBACK **is:** INFORMATION
(VERBAL, NON-VERBAL, WRITTEN)

Given to: INDIVIDUALS, GROUPS

Its purpose is to: KNOW HOW THEY AFFECT OTHERS
AND HOW THEY ARE PERCEIVED

GOALS

1. Self-awareness
2. Improvement of relationship
3. Personal growth

FEEDBACK IS NOT TO:

1. To unload
2. To hurt
3. To hit back or take revenge
4. To overwhelm

EFFECTIVE FEEDBACK IS:

Giving perceptions
non-threateningly
so that they will be
received
non-defensively.

EFFECTIVE FEEDBACK FORMULA
= Mention situation +
= Specific behavior +
= Effect
 - on me and/or
 - on task and/or
 - on relationship

10

STRATEGY AND PROGRAM PLANNING

I. OBJECTIVES

- Using the **Strength-Weaknesses-Opportunities-Threats (SWOT)** analysis of the barangay, participants are able to identify the major strategies that will:

    - Use the strengths to maximize opportunities
    - Overcome weaknesses by maximizing opportunities
    - Use strengths to ward off threats

- Identify the appropriate programs, systems, mechanisms, structures, material and people requirement and activities to achieve the mission for the barangay.

II. SESSION GUIDE

11

Methodology/Process:

Modified SWOT Analysis (30 minutes)

- Based on the results of consultations with the barangay through the core group, with leaders, and from the results of the Problem Tree Analysis, the facilitator should be able to come up with a matrix of SWOT for the barangay vis-à-vis the solid waste management process.

- These need to be validated with the participants as they may add or remove some items from the list.

- After a consensus has been reached on what constitutes the SWOT of the barangay, the facilitator will guide the participants in coming up with strategies.

Small Group Workshop (30 Minutes)

- Participants will be grouped into four, each to work on a specific strategy.
- The group will discuss the specific strategies, programs, mechanisms, structures and activities needed to realize the stated goals.
- Results will be written on Manila Paper and presented in matrix form.

*Reporting/Synthesis Processing
(45 mins.)*

- Each group will be given 10 minutes to report. The facilitator could ask for clarifications, comments, suggestions and finally, consensus on the acceptance for each of the group output.

- After all the strategies have been completed, the Facilitator could summarize the strategies and the corresponding operational targets.

- The facilitator could ask the following questions:

GUIDE QUESTIONS

■ What programs or major activities can be done under this strategy? *(Anong programa ang gustong gawin sa balaking ito?)*
■ For each of the program or major activity, what are the specific activities/steps on how to do this?
(Ano ang mga detalye ng programa o mga hakbangin?)
■ How, who and for whom do we do the specific activities/steps? *(Paano, sino, o para kanino ang mga gawain?)*
■ When do we target accomplishments or implementation of each of these? *(Kailan ang takdang panahon ng pagsasagawa ng mga ito?)*
■ What are the requirements to do these? *(Ano ang mga kailangan upang magawa ang mga gawain?)*

1. Can you still think of other strategies and programs needed to address the solid waste management concerns of the Barangay?
2. With these strategies and programs, have you provided an intervention for the various causes and contributory factors identified earlier?
3. Do you think that if all the target tasks are done, we can make a difference in your community?

Summary Statement

1. What we have done just now is put details into the mission statement you made in the earlier workshop. Together, these strategies, programs and mechanisms will contribute to the realization of the goals the group has set. This gives us a clear picture of the means towards which we can put our acts together as a community and work towards a common vision of a clean and progressive community.

2. As you can see, there is no one answer to the solid waste management problems of the barangay. You have set various interventions that respond to the types and causes of the problems. You have prepared here an integrated approach for solving the identified problems.

3. We will be setting the immediate tasks so that the plan drafted today can be refined and prepared for presentation to the Barangay Council and the community through the Barangay Solid Waste Management Committee (Action Planning).

PARTICIPATORY SOLID WASTE SITUATION ASSESSMENT AND ISSUE ANALYSIS

I. OBJECTIVES:

- Participants are able to describe and analyze the solid waste situation in their communities and relate this to environmental, social, economic and political aspects of their community.

- Solid waste management needs of the community are identified;

- Identify and prioritize issues and concerns requiring interventions and solutions;

- Trace the causes of the identified issues and concerns;

- Identify the other contributing factors to the current waste situation;

- Validation of Perception survey results and other barangay, city, regional and national data; and

- To increase the awareness of the participants about their community's solid waste situation.

13

II. SESSION GUIDE

Methodology:

Small Group Discussion/Workshop
(One hour, including Report Preparation)

- Participants will be grouped by cluster of adjacent streets.

- Discussion per group will be guided by a facilitator. Each group shall select a secretary and a reporter.

- Discussion will revolve around the results of the sitio/cluster or block consultations on solid waste situation.
    - Issues and problems will be defined.
    - Concrete manifestations of these problems will be enumerated.
    - Causes of these issues and problems will be analyzed.

- Group output will be presented through drawings and supplemented by the following matrix:

Issues and Problems	Concrete Manifestations	Causes or Contributory
Examples: ■ Hindi maayos ang koleksiyon ng basura kung kaya't marami ang di nakokolekta. ■ Walang ginagawa ang mga opisyales upang malutas ang problema. ■ Maraming maling gawi ang mga tao sa pagtatapon ng basura. ■ Maruming paligid ng komunidad ang nagdudulot ng sakit at maraming langaw.	Examples: ■ Maraming basura ang natatambak sa collection points ■ Walang nangongolekta di madaanan ang mga kalye. ■ Mga nagtatapon ng basura sa ilog di hinuhuli walang ordinansa ukol sa pagtatapon ng basura ■ May mga sirang muwebles sa bangketa ■ Kalyeng ginagamit na labahan, tindahan, kulungan ng hayop mapanghing eskinita/pag-ihi maski saan. ■ Mapanghing eskinita/ pag-ihi maski saan ■ Tae ng hayop o tao sa daanan ■ Mga basura sa estero o kanal ■ Tirang pagkain na maski saan itinapon	Examples: ■ Walang malinaw na plano upang pagtuunan ang tamang pagkolekta ng basura ■ Walang tukoy na tao upang pamahalaan ang basura. ■ Walang malinaw na batas o di mahigpit na pagpapatupad ng mga batas. ■ Walang disiplina at pakialam ang mga tao ■ Di alam kung paano ang paghihiwalay ng basura ■ Major categories: Economic, political,socio-cultural and environmental reasons.

- Each group will be provided the idea cards/manila paper to write down their synthesis or drawing as a group.

- During the plenary, the group output will be presented by the reporter for five minutes per group only.

*Synthesis - Option A
(30 mins.)*

■ Classifying the Cleanliness and Waste Situation & Problems/ Causes into the following aspects:
  ■ Attitudinal and practices
  ■ Knowledge and capability
  ■ Collection and disposal system
  ■ Environmental factors
  ■ Political will and decision-making

15

■ Input on – as a validation of the above-described situation
  ■ Perception survey results
  ■ Estimated waste generation of the barangay
  ■ Solid waste related issues and problems in the city and in Metro Manila

SUMMARY *Statements*

We are part of the problem. Therefore, we need to be a part of the solution. But identifying the appropriate solution comes from a good understanding or reading of the situation.

■ That the solid waste problem is not an isolated problem; it is the result of the interaction of various environmental and socio-cultural; economic and political factors working in a community.

■ Therefore, any solution to the waste problem need to consider these factors.
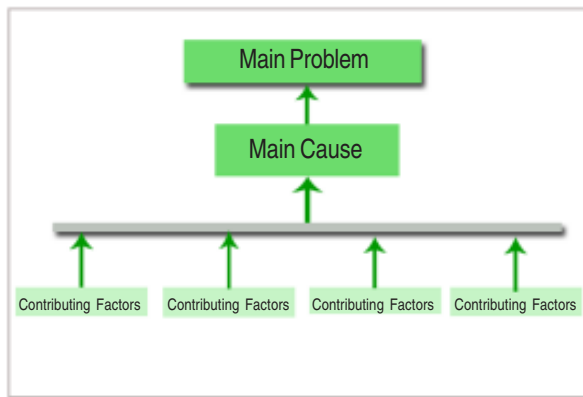
Synthesis - Option B - Problem Tree Analysis

- Write the problems, causes and contributory factors in idea cards, one idea, one card.
- Assist the group to come up with a problem tree of the ideas that came out, logically arrange as to their cause and effect relationship.
- Contributory factors – should be located at the lower part of the tree (roots).
- Causes at the center (trunk)
- Problems and the concrete manifestations of the problem – effects (branches or crown)
- Draw connecting lines to show the cause and effect relationship of the different ideas presented.
- The basic structure is as follows:

16

```
                    ┌──────────────────┐
                    │   Main Problem   │
                    └──────────────────┘
                             ↑
                    ┌──────────────────┐
                    │    Main Cause    │
                    └──────────────────┘
                             ↑
    ════════════════════════════════════════════════
        ↑              ↑              ↑              ↑
  Contributing    Contributing   Contributing   Contributing
    Factors         Factors        Factors        Factors
```

SUMMARY Statements

- The problem tree is a visual way of understanding the relationships among problems faced by a community. It enables the community to identify key problems.
- Debate the cause-effect relationships among them.
- Establish a hierarchy of problems.
- Construct a tree which will clarify the relationship visually.
- The tree, at one glance, can enable people to identify and prioritize problems together.

Guide to
STREET CONSULTATIONS ON SOLID WASTE SITUATION ASSESSMENT & ISSUE ANALYSIS

I. METHODOLOGY

Focused Group Discussion

II. PARTICIPANTS

Household representative per cluster, group or street

■ Discussion per group will be guided by a facilitator or a core group member. Assign a recorder or secretary.

■ Discussion will revolve around the solid waste situation of the particular cluster or street.

■ Issues and problems will be identified.
- ■ Concrete manifestations of the problems to be enumerated.
- ■ Causes of these issues and problems to be analyzed.
- ■ Solutions to be proposed.

17

GUIDE QUESTIONS

1. What are the issues and problems related to solid waste management in your community? (Ano ang Problema sa basura at sa Pamamahala nito?)

2. Give concrete descriptions or manifestations of these problems or how do these problems manifest themselves? (Ano ang konkretong napapansin ninyong kalagayan na nagsasabi o nagpapahiwatig ng problemang nabanggit sa inyong lugar?)

3. What do you think are the causes of or the contributory factors to this situation? (Bakit nagyayari ito? Or ano ang mga sanhi at dagdag na dahilan upang mangyari ito?)

4. What do you think can and should be done to improve the situation or resolve the problems? (Ano ang mga dapat gawin o solusyon sa mga suliraning ito?)

■ Group output can be written in the following matrix:

Issues and Problems	Concrete Manifestations of the Problems	Causes or Contributory	Proposed Solution
Examples: ■ Hindi maayos ang koleksiyon ng basura kung kaya't marami ang di nakokolekta. ■ Walang ginagawa ang mga opisyales upang malutas ang problema. ■ Maraming maling gawi ang mga tao sa pagtatapon ng basura. ■ Maruming paligid ng komunidad ang nagdudulot ng sakit at maraming langaw.	Examples: ■ Maraming basura ang natatambak sa collection points ■ Walang nangongolekta di madaanan ang mga kalye. ■ Mga nagtatapon ng basura sa ilog di hinuhuli walang ordinansa ukol sa pagtatapon ng basura ■ May mga sirang muwebles sa bangketa ■ Kalyeng ginagamit na labahan, tindahan, kulungan ng hayop mapanghing eskinita/pag-ihi maski saan. ■ Mapanghing eskinita/pag-ihi maski saan ■ Tae ng hayop o tao sa daanan ■ Mga basura sa estero o kanal ■ Tirang pagkain na maski saan itinapon	Examples: ■ Walang malinaw na plano upang pagtuunan ang tamang pagkolekta ng basura. ■ Walang tukoy na tao upang pamahalaan ang basura. ■ Walang malinaw na batas o di mahigpit na pagpapatupad ng mga batas. ■ Walang disiplina at pakialam ang mga tao ■ Di alam kung paano ang paghihiwalay ng basura ■ Major categories: Economic, political,socio-cultural and environmental reasons.	

18

III. AREA FAMILIARIZATION

Continuous visits to familiarize yourself with the community's physical setting. This is an opportunity to establish the geographical location of houses that will be used to cluster family groups into neighborhoods. Community Organizers (COs) should also take note of the local organization operating in the community wherein it can also tap for mobilization of groups and organization.

IV. IDENTIFICATION OF CORE LEADERS/ CORE GROUP MEMBERS

Spotting of potential leaders is a strategic link in looking for a core group relative to the implementation of CBESW. The core group/leaders will be the primary partners of the COs in the task of having direction of CBESWM organizing and implementation phase.

The COs should ensure the following criteria in the identification of core leaders/core group members:

- They must be credible.
- They must have a sense of commitment for CBESWM.
- They must be residents of the Barangay for at least six months.
- They must be articulate, sensitive as well as attentive to fellow community members.
- They represent the majority's interest.

COs should list potential core group members who may be formal and informal leaders. She/he should be guided of the following:

- COs should purposely scan for potential leaders.
- COs should look beyond the formal leaders.
- Request them to assist in some activities to know their capacity/ capabilities.
- If possible, COs should do a reference check with other agency workers who are present in the Barangay.
- Upon coming up with a short list, directly talk to the potential leaders and give them a clear idea of the tasks to be assigned.
- Train and assist them.
- Don't immediately ask for long-term commitment. Initially, ask them to attend organizational meeting so that they will have clearer idea of their roles and get encouragement from others.

COs should remember that core members should be carefully selected because of their potential to become local organizer later on.

Once the core group members have been chosen and confirmed by their neighborhood, conduct an orientation meeting and discuss the following:

- Why the core group must be formed
- What are the functions of the core group
- Why they were identified as potential members
- What their position and commitment are to this challenge
- Know their position and commitment are to this challenge
- Know their training needs to enhance their potential/ capabilities
- Initial plan of action and schedule activities

The formation of the core group wraps up the activities for the social preparation phase.

V. COMMUNITY INTEGRATION

The credibility of a Community Organizer (CO) will depend on how he/she will carry himself/herself in integrating with people. As an outsider, the CO should be able to identify himself/herself with the community by keeping a low profile and maintaining a simple lifestyle.

Stress the community-based program approach by inspiring them to collectively act in demanding for and managing the project.

On the other hand, COs should not raise high expectations nor give promises that cannot be met by the program. This can affect the credibility of the program/project.

Some of the methods to be used in integrating with the community:

- Small group discussion
- Community meetings
- Dyad's interaction
- Participation in social and economic activities
- Informal discussion with the groups/sectors

The following pointers for community integration should be considered:

- Be one of them.
- Try to dress, talk and act as community residents do.
- Establish good interpersonal relationships. Don't antagonize the people.
- Keep a low profile. Be humble.
- Be sensitive on how your presence affects the community and the people you deal with.
- Be sociable and friendly. Be punctual and keep appointments.
- Be respectable. Avoid excessive drinking and gambling which might damage your professional credibility.
- Practice what you preach.

VI. COMMUNITY PLANNING

The Community Planning Workshop is a major activity in the community organizing process wherein COs should serve as a navigator, consciously steering the efforts of the community towards a deeper understanding on how CBESWM will be implemented.

A Community Planning Workshop will be conducted to set out a motion process of deeper community study and analysis. It is a way to give directions on the implementation by enhancing people's capabilities to recommend and plan courses of action.

A Community Planning Workshop will facilitate the formulation of an action plan that will guide the community in setting up targets, activities to be undertaken, and output towards the implementation of the project.

How to conduct
PARTICIPATORY COMMUNITY PROFILING AND SOLID WASTE SITUATION ASSESSMENT

I. OBJECTIVES

- To identify solid waste management and related issues per street, their implications, and how the participants can address them.

- To actively involve stakeholders in the information gathering process and establish a common information base for all the participants.

- To increase the awareness of participants about their community's solid waste situation.

- To provide an understanding of the community's role in the project.

22

II. SESSION FLOW
Preliminaries
A. *Project Brief*
B. *Discuss objectives of the activity*
C. *Identifying Solid Waste Management issues/Problems Workshop*
      Solid Waste Issues and Problems Per Street

- Individual Assessment (5 mins.)

   Participants will be asked to fill up an individual worksheet. This will be their basis for the discussion.

- Group Discussion (30 mins.)

   - Participants will be grouped per street of residence/work. Each group will have a discussion leader, a secretary and a reporter. The discussion should answer:
   i. What are the top 10 SW-related issues/problems in your streets?
   ii. Why did they say so/bases for these choices?
   iii. Which of these ranks first, second and so forth?

   - Each group will be provided with a manila paper to write down its synthesis as a group. This will be used during the plenary.

- Individual Worksheets will be collected for the PMO's reference.
    - Plenary Session for reporting Outputs (1 hour and 15 mins.)
        - Each group will report. (5 mins. per group)
        - While this is ongoing, the co-facilitator will write down problems on the attached matrix to evaluate the weight of each issue/problem and to identify the cause and effect of these issues. The same issue will be written on idea cards, one idea per card.

Solid Waste-Related Issues and Problems of Community
- Problem Tree format (1 hour)
    - Facilitator will ask participants: Does problem A cause Problem A? Does Problem A cause Problem B? If the answer is yes, the box corresponding to the identified pair will be marked with an "X".

    - Horizontal marks will be totaled as well as vertical marks. The issue/problem with the highest total horizontally is the major problem. The issue/problem with the highest total vertical marks is the major cause.

D. *Situating the Community*
- In Metro Manila, in relation with the other project sites
- LGU Solid Waste Basic Statistics
- Secondary Community Data Presentation and Validation on (Map, No. of Streets, No. of Households, Population)

E. *Identifying Possible Solutions to the SWM-related Problems of the Community Workshop*

    Objective Tree Format

    - Referring to the Problem Tree, the facilitator will ask the group what changes they would like to see. These refer to the results in the Objective Tree.

    - The facilitator would then ask the group ways of bringing these changes. These refer to the activities in the Tree.

F. *Evaluating and Affirming Results of the Workshop*
- Using the Objective, Reflective, Interpretive, Decisional (ORID) method, the participants will evaluate and affirm their outputs.
- Participants will be asked to sign their names on the manila paper where the Objective Tree is written.

Stakeholders Analysis
(for Identifying Stakeholders and their Role in the Project)

I. OBJECTIVES:

Stakeholders of the proposed plan are:

- Identified;
- Their interests made known; and
- Their roles in the success or failure of the project defined and clarified.

II. METHODOLOGY:

Brief input on what stakeholders are.

24

Small Group Workshop (15 minutes)

- The same groupings will be utilized.

- Considering the earlier discussions of the group and the just-completed solution tree, the group will discuss the following guide questions:
    - Identify all the stakeholders involved in the just-completed plan, classifying if primary, secondary and key stakeholders (who).
    - For each stakeholder, specify their interests (why).
    - Define their potential role or responsibilities in the project (what).

- Answers will be written on idea cards: 1 idea = 1 card.

Synthesis/ Processing (15 minutes)

- During plenary, the Facilitator, using prepared matrix on manila paper, gets answers on the above questions to fill up the Stakeholders Matrix.

- The facilitator will go directly to get consensus on the following:
    - Who and what type of stakeholder
    - Why the stakeholder
    - What is his/her role in the project

- While this is going on, the co-facilitator posts the idea cards on the prepared matrix.

DEFINITIONS

STAKEHOLDERS
Persons, groups or organizations with interests in a given action. This action can be a project or a program. They can be further differentiated into primary, secondary and key stakeholders.

PRIMARY STAKEHOLDERS
They are the direct impact recipients – either as beneficiaries or as those who will bear the costs or negative impacts.

SECONDARY STAKEHOLDERS
They are the mediators of the process, and are usually, externally based.

KEY STAKEHOLDERS
They are the primary or secondary stakeholders whose involvement is significant for the success of the action.

25

OBJECTIVE OF STAKEHOLDERS' ANALYSIS

■ As a planning tool, Stakeholders' Analysis is used to get a better picture so planners can concentrate on strategies that will build on existing alliances and device mechanisms to deal with existing hostilities.

■ Stakeholders' Analysis help make various stakeholders aware of the need to cooperate and work together.

How to design a
Solid Waste Management Advocacy Plan of Action

I. WHAT IS THE PROBLEM

Define exactly the problem. Identify specific elements or components that can be considered part of he problem (with the associated issues).

II. WHO IS THE KEY AUDIENCE

These are the target adopters. This is better understood if grouped according to segments.

Examples:

■ Policy and decision-makers – important to be reached as these are the people who will craft the laws and ordinances that are the bases for solid waste and environmental programs.

■ Schools – have important role in promoting environmentalism (SWM principles) especially through the integration of environmental and SWM concepts in the school curricula.

■ Media organizations – social influence, promotes environmentalism and SWM consciousness.

■ Youth organizations – most active group in promoting environmental concerns, operating on the principle of peer pressure; need to have access to environmental and SWM knowledge.

■ General public – a recipient, not only of any specific campaign directed to the general public, but also of campaigns directed to specific audience target.

III. WHAT ARE THE OBJECTIVES

■ Objectives are very specific statements about what we want to achieve under certain conditions. It must have five critical characteristics, as follows:

- **Time boundedness**. One must be able to achieve the objective within a specific period of time.

- **Observability**. One must be able to observe what one intends to accomplish.

- **Measurability.** One must be able to measure what it is that one wants to achieve.

- **Achievability.** The objective must be achievable.

- **Simplicity.** The objective would be clearer if it is simply stated.

- Another way of stating objective is by considering the following ABCD of Environmental Advocacy Objectives:

  - **Audience:** Who are your audience?

  - **Behavior:** What do you want your audience to demonstrate?

  - **Condition:** When do you want to begin observing this behavior in your audience and under what conditions?

  - **Degree:** To what extent or degree is your audience able to demonstrate what are expected of them?
    Example: By December 31, 2002, all drivers of passenger jeepneys plying the Calamba-Los Baños route shall have installed a covered plastic garbage container in their respective vehicles.

IV. WHAT IS THE SPECIFIC ADVOCACY STRATEGY?

If we are dealing with a very specific topic, then we must use a specific strategy. This means we should employ a combination of methods, messages and techniques by which we want to achieve our advocacy objective.

According to experts, there are four ways of reaching our audiences. We can **inform, educate, persuade or entertain them**, or we can do **all four at the same time.**

V. WHAT IS THE MESSAGE?

Define the message you want to communicate. The next question is how will you treat your message?

The message has to be framed so that it will easily catch the attention of the intended audience, and persuade them to act accordingly.

To achieve this, one will have to design your messages according to communication campaign principles and techniques.

The following techniques in message design may be employed:

- **Emotional vs. rational appeals**
  Emotional appeals stimulate human emotions, while rational appeals build strong arguments based on logic and supporting evidence for claims being made.

- **Positive vs. negative appeals**
  Negative appeals are also a form of emotional appeal, but they are threatening. They suggest unfavorable consequences resulting from non-compliance with the suggested practice. There is enough evidence in the literature indicating that people tend to ignore potential threats for as long as they can. It takes quite a substantial amount of threatening evidence to get people to take negative appeals seriously.

- **Humorous vs. serious appeals**
  Use humor to increase the effectiveness of the communication message, but make sure this is consistent with the message – a rule of thumb on the channels and mass media channels.

- **Mass vs. individual appeals**
  Mass appeal builds on the strength of social pressure on an individual. In effect, what we are saying is, "Everybody is doing it, so why are you not doing the same thing?" So mass appeal is appropriate when the adoption of an idea or practice needs social approval. On the other hand, if the idea or practice is personal, then the individual appeal approach is more appropriate.

- **One-sided vs. two-sided arguments**
  One-sided arguments have been found to be more effective with people who have initially agreed with a favorable point of view expressed in the communication message. Two-sided arguments have been found to be more effective with those who are initially opposed to the viewpoint expressed in the message. Research has found that better-educated people tend to be influenced by two-sided arguments, while less educated people are influenced by one-sided arguments.

- **Definite conclusions vs. open conclusion**

    If your target audiences are intelligent, then the open conclusion approach may be more appropriate because they may be able to draw conclusions themselves. On the other hand, if you are sure that your audience is not intelligent, then you employ the definite conclusion approach to make sure that they will not miss the point.

- **Repetitive vs. one-time appeals**

    Research on the effects of repetition indicate that repetition increases the amount of information the audience can remember. However, after three or four repetitions, any additional information that can be remembered would be less significant and therefore, less useful. If the repetition is too frequent and there is no corresponding reward, then there is likelihood of loss of attention. In addition, repetition can have a negative effect if the message is weak or perceived to be offensive. As a general rule, therefore, increase the interval of repetition each time you give the message (e.g., twice a day or two days, then once daily for a couple of days, then twice a week for a week, then once a week for a month, then perhaps twice a month for a couple of months) until you decide to discontinue.
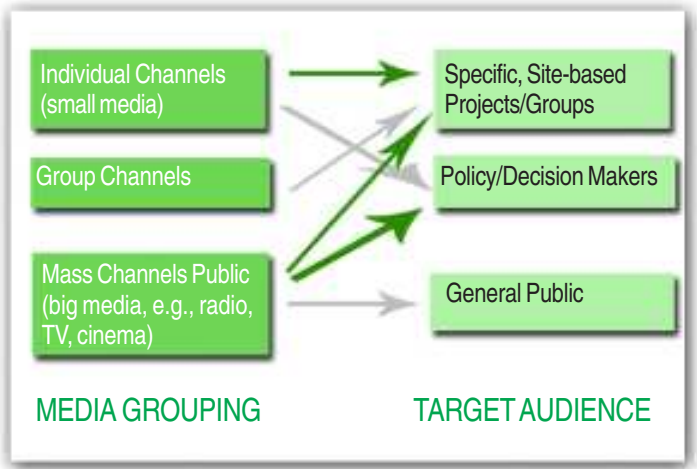
29

VI. WHAT MEDIA CHANNELS CAN BE USED?

There are three categories that can be used:

- **Individual Channels** are personal. They include home visits, office calls, personal letters, individual tutorials, and self-learning materials. These are very effective when dealing with individuals.

- **Group Channels** are designed to reach groups of people. Examples are group meetings, study tours, role playing (this would require more than one individual at a time), group discussions, demonstrations, drama groups, and the like.

- **Mass Media** channels are designed to reach the general public. Traditional mass media include pamphlets, posters, newsletters, billboards, brochures, books, bulletins, circulars, newspapers, magazines, radio, television, movies. These days, we have more options such as video programs, CDs and the like.

The effectiveness and efficiency of use of various media channels depend largely on the nature and purpose of the communication, as well as the target audience.

Various media channels can reach multiple audience segments, but it must be kept in mind that there will be one or perhaps a couple of media that are appropriate only for a specific audience group. Other media would be supportive.

MEDIA GROUPING	TARGET AUDIENCE
Individual Channels (small media)	Specific, Site-based Projects/Groups
Group Channels	Policy/Decision Makers
Mass Channels Public (big media, e.g., radio, TV, cinema)	General Public

VII. EVALUATING THE ADVOCACY CAMPAIGN

There are two processes involved: **monitoring and evaluating.**

Monitoring is recording what is or is not happening, and checking or observing activities. An example is simply recording the number of feedback letters or the number of seminar participants.

Evaluating is actually judging or rating activities, or appraising or interpreting data. Examples are an appraisal on whether or not there has been an improvement in the collection of garbage and in the effectiveness of the garbage disposal system, and judging the impact of community participation in solid waste management.

In planning the monitoring and evaluation system, one can ask the following questions:

1. What do you want to achieve?
2. What do you accept as evidence of your success?
3. What information do you need to produce this evidence?
4. What are your sources of information?
5. How are you going to collect the data/information?
6. What tools or instruments are you going to use to collect and analyze the data?
7. Who will collect the data for you?
8. Who will use the information you have obtained?

VIII.   FUNDING THE ADVOCACY CAMPAIGN

A budget is a plan of action expressed in financial terms. An effective way of presenting budget requirements for advocacy campaigns is to list down all the specific activities and cost them out.

It is necessary to know how much it will take to perform a particular activity. To be able to present the budget in an appropriate format, one needs to prepare as well a work plan: a Gantt chart showing the various activities and the relative time frame within which to undertake these activities. For each activity, there's a need to show the specific items and their respective cost. Cost includes personal services, supplies, travel requirements, equipment rentals, and forth.

Module 9

TRAINORS' ORIENTATION
Training on Proper Waste Management at the Household Level

I. RATIONALE

Republic Act 9003 calls for segregation at source. Thus, proper waste management should be taught at the household level for the successful implementation of this Act.

Given the huge number of households in any barangay, it is necessary to train prime movers from the barangay and equip them with the proper knowledge and skills on ecological solid waste management so they can share these with other members of their community.

32

II. GENERAL COURSE OBJECTIVE

To orient and train members and officers of community-based organizations that are active on environmental issues (specifically on solid waste management) and the proper waste management of biodegradables and non-biodegradables at the household level.

III. SPECIFIC OBJECTIVES

By the end of the half-day orientation-training, the participants are able to:
- Describe the solid waste management hierarchy;
- Identify and sort the different types of solid wastes;
- Properly handle the different types of solid waste;
- Experience a hands-on training on household composting.

IV. PARTICIPANTS

Expected participants are active members and officers of community-based organizations that are pursuing environment-related projects in their barangay.

V. METHODOLOGY

Training will be facilitated using various training methodologies such as:

- Lecture with interactive discussion
- Structured learning experiences
- Exhibit of the different types of solid wastes from households
- Hands-on demonstration

Preliminaries

- The host Community Organizer (CO) leads/asks a participant to lead an invocation.
- The host CO calls on the Barangay Chairman or Kagawad-in-Charge to give welcome remarks.
- The host CO facilitates a getting-to-know-you activity.
- The host CO presents the objectives of the Trainors' Training.

SESSION 1: PROPER SOLID WASTE MANAGEMENT

Estimated Time/Duration: One and a half hours

Contextualization

- The host CO briefly discusses the CBESWM project and its objectives.
  - Implementors of the project
  - Targets of the project
  (cleanliness, 25% waste reduction, separate collection, MRF operations)

- The host CO briefly discusses the status of the pilot site, in relation to its Solid Waste Management System.

Discussion/Presentation

Topic 1: Solid Waste Generated at the Household Level

- The trainer asks for two volunteers who will act out the story to be narrated by another volunteer.

- The trainer discusses the types of solid waste generated at the household level and their proper handling, emphasizing that the basis for this is Republic Act 9003 as well as the Unified Approach to SWM.

  - Compostables are primarily kitchen waste.

  - Recyclables are consumer items that can still be converted into suitable/beneficial use or can be re-processed/recycled.

  - Residual waste are those that cannot be composted, reused nor recycled.

  - Bulky waste are items that cannot be placed in containers (i.e., worn-out furniture) because of their size.

- The trainer emphasizes the following points:

  - Recyclables should be clean and dry.

  - Recyclables should be free from contaminants.

  - Residual wastes should be packed properly.

  - Kitchen waste/Compostables should be strained/drained.

  - There would be a special collection day for bulky waste.

- The trainer then focuses on the **Types of Recyclables.** The trainer explains that because of technological advances, more and more composite materials are being developed – from the types of paper to plastic – and states that:

  - The basic units of plastics are ethylene and vinyl. Ethylenes are softer than vinyl. The sando bag is polyethylene plastic. Thus, it is the softest. They are, however, non-recyclables because they are usually contaminated when used – the same with paper.

- The trainer then takes out different types of plastic, paper, glass and other recyclable wastes. He/she instructs the participants to look for the numbers of the bottles at the bottom part.

Solid Waste Management Hierarchy

- Source reduction: Being wise in choosing consumer products
- Source reduction: Cooking what can be eaten

- Importance of recycling: Resource conservation

- Recycling and the role of segregation in sustaining the process

- Segregation: Transforming waste into a resource

Topic 2: Low-cost Technologies that can be Adopted at the Household Level

- Separate containers for recyclables and compostables.
    - Different options to store recyclables neatly
    - Where to store compostables

- For bottles/glass containers/aluminum cans/plastic containers
    - Use of water from final wash of laundry (*"pinagbabaran"*)

- For paper/cartons
    - Air/sun-drying of paper/cartons

- Processing compostables
    - Use as feed for pets or give to those who have pets or those who raise hogs.
    - Backyard/household composting

35

OPEN FORUM
Estimated Time/Duration: 15 minutes

The trainer asks for any clarificatory questions and answers them. If there are none, the trainer closes the session.

SESSION 2:
HOW TO DO BACKYARD/HOUSEHOLD COMPOSTING

Prior to the training, the participants will be asked to bring the materials needed for this session.

Estimated Time/Duration: 45 minutes

Contextualization

The trainer points out that the biggest chunk of solid waste is actually made up of biodegradables – those that come from the kitchen and from gardens/yards. In Metro Manila, it is difficult to set up barangay composting because

it is difficult to find vacant lots for the purpose. It is, therefore, important that households do their share in processing compostables when they can.

SYNTHESIS

The trainer closes the session by sharing the benefits of composting and applying compost to the soil.

EVALUATION

- The trainer will distribute the evaluation forms and ask each participant to fill one out. The trainer then collects them back for reference.

- The trainer closes with these statements:

  - What we are doing is not easy because we are dealing with people's attitudes and practices which were acquired through time. So changing them will also require time and practice which should start from us in this room.

PERCEPTION SURVEY
Enumerators' Training

I. RATIONALE

The success of any survey activity rests a lot on how enumerators administer the questionnaires. No matter how good the questions are, if the enumerators do not ask the questions effectively, good results cannot come out from the activity.

Thus, enumerators need to be trained and briefed thoroughly on the various factors and probable situations they may encounter in the field.

II. GENERAL TRAINING OBJECTIVE

37

To equip the participants with needed knowledge and skills for an effective conduct of the Perception Survey.

III. SPECIFIC OBJECTIVES

At the end of the one-day training, the participants are able to:

- Explain the objectives of the Perception Survey;
- Appreciate the need for a thorough understanding of the perception survey activity;
- Explain the information expected to be obtained from the different survey questions;
- Identify the appropriate ways to handle or manage different situations in the field;
- Discuss and explain the do's and don't's in effective interviewing;
- Demonstrate appropriate skills in communication, interview and questionnaire completion; and
- Come up with an operational plan for an effective and efficient field survey.

IV. PARTICIPANTS

Expected participants are the core group members and identified volunteers from each of the project pilot sites. A minimum of nine core group members and/or volunteers are targeted for the workshop.

V. METHODOLOGY

Learning will be facilitated with the use of various training methodologies, such as:

- Input/lecture with interactive discussion and visual aids
- Discussion method with use of Idea Cards
- Role Playing/Simulation
- Workshop Method

    - Facilitator prepares at least five scenarios for interview.

    - Each participant will be given a maximum of 15 minutes to conduct an interview of the facilitator, who will use a different scenario for each.

    - While one participant is conducting interview, the rest should observe and take note of the way interview was done, how the interviewer managed the answers. Take note of the strengths and weaknesses of each interview process.

    - The facilitator then processes the activity: identify the strengths, weaknesses, and summarize these into DO's and the DON'Ts.

    - At the plenary, the facilitators present the output of the group for a common guidelines (DO's and DON'Ts).

- Action Planning using the following matrix:

Street/Sitio	Boundary	No. of Respondents	Interval	Assigned Persons

Guide to Area Profiling

DATA/INFORMATION NEEDED	SOURCES OF DATA	REMARKS
Cultural Features ■History of the Barangay ■Language and dialects ■Religious groups	Barangay Office or from key informants	
Demographic Data ■Population ■Number of Households ■Population Density/ Distribution ■Average size of households	■NSO data ■ Barangay/LGU data especially from health center ■Foot survey results	

Geo-physical Characteristics
■Geography
  ■Location of the area and boundaries with respect to other administrative and political boundaries
■Total land area of the Barangay
■Topography, elevation
■Land use, vegetation cover, if any
■Hydrology
  ■Drainage
  ■Tributary patterns
  ■Waterways
  ■Water quality of surface water
  ■Description of prevailing tidal
	■Topographic map
	■Barangay map and street map
	■LGU Map/Locational Map – NAMRIA
	■Barangay office or LGU – Municipality or City Planning Office
	■Landuse map
	■DPWH
	■Ocular visit
	■Photo documentation	

39

DATA/INFORMATION NEEDED	SOURCES OF DATA	REMARKS
■ Number, sizes, types and general description of streets/roads **Socio-economic, Cultural and Political Environment** ■ Livelihood and income 　■ Livelihood and income sources 　■ Income levels of population 　■ Commerce and industries – types, contribution to the economy of the barangay ■ Transportation and communication ■ Health and education – description of the health and education facilities by type, number and spatial distribution; morbidity and mortality rates caused by diseases ■ Political 　■ Political units and boundaries 　■ Citizen participation 　■ Local legislation on environment and natural resources 　■ Cooperatives and NGOs – discussion of the activities	■ NSO data ■ Barangay/City data ■ Barangay/City officials ■ Ocular visit ■ Health Center ■ Education Boards ■ Ocular visit ■ Schools ■ List of NGOs and cooperatives ■ Officials and members of cooperatives and NGOs	

40

DATA/INFORMATION NEEDED	SOURCES OF DATA	REMARKS
Solid Waste Management System and/or Condition		
■Description of the sewerage and waste discharge system as to type, number and location	■Barangay officials ■Solid Waste Management group: street sweepers, collectors, junkshop owners ■Use of monitoring tool for cleanliness	

■Solid waste management structure
  ■Barangay Solid Waste Management Committee
  ■Street Sweepers
  ■Collectors
  ■Junkshops		

■LGU/Barangay Regulations/Ordinances		
■Storage System: Household/Communal/ Community/what are used in sidewalks ■Type of garbage: segregated or mixed garbage		
■Collection System: frequency, who collects (LGU, Barangay, Informal, etc.), what type of equipment used		
■Assessment of cleanliness of streets		
■Past and current SWM programs or projects		
■Other relevant data or information		

41

About the Programme

The Community-based Ecological Solid Waste Management Programme is a project of the United Nations Development Programme (UNDP) and the Department of Environment and Natural Resources (DENR), with funding assistance from the Government of Japan. It is implemented through the National Solid Waste Management Commission (NSWMC). The project acts as a catalyst for the implementation of Republic Act No. 9003, or the Ecological Solid Waste Management Act.

UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.

We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners.

In the Philippines, UNDP's network links and coordinates global and national efforts to help countries build and share solutions to the challenges of democratic governance, poverty reduction, crisis prevention and recovery; and energy and environment. UNDP helps developing countries attract and use aid effectively.

In all its activities, UNDP encourages the protection of human rights and the empowerment of women.

Support for the printing of this publication stems from UNDP's goal to ensure environmental sustainability. UNDP hopes that through this handbook, and the companion fieldbook, Filipinos will understand the value of practicing ecological solid waste management in their communities.

www.denr.gov.ph/nswmc/cbeswmp