

Good Practices in Local Governance: Facility for Adaptation and Replication (GO-FAR) Promoting Local Environmental Planning and Management (L-EPM)



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City Government of Cagayan de Oro
through City Local Environment and
Natural Resources Office (CLENRO)



**UNITED NATIONS
DEVELOPMENT
PROGRAMME**



Cagayan de Oro's Local Environmental Planning and Management Process

FOREWORD

For the City of Cagayan de Oro, the process has become a very important environmental experience. It has further enhanced the ecological awareness of every sector in the city, especially its citizens.

By becoming one of the cities to demonstrate the Local Environmental Planning and Management (L-EPM) projects, it proved the capability as well as the capacity of Cagayan de Oro in local good governance. The accomplishment of the projects in the three barangays is an essential display of commitment. In which case, it supports transparency, representation, accountability and local empowerment.

With the documentation at hand, it is expected that the replication of the entire process will be possible as it certainly be further developed. The process has come a long way in its implementation. As a result, this is a form of invitation in the cause of collective effort in the desire for a better and clean society.

Fortunately, the stakeholders have persevered throughout the journey. It is their unyielding participation and assistance that realize every activity's purpose.

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

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CHAPTER 1

The Working Group

INTRODUCTION

In April 1998, an agreement between the Department of Environment and Natural Resources (DENR), National Economic and Development Authority, United Nations Development Program and the League of Cities of the Philippines (LCP) established the Local Environmental Planning and Management (L-EPM) Project. It is a localization effort of Philippine Agenda 21 that was preliminary launched in three demonstration cities – Lipa, Tagbilaran and Cagayan de Oro.

The goal of the project is to enhance the capability local government units (LGUs) in the implementation of EPM. Consequently, the process is an empowerment of the LGU for a sustainable development basically worked out in grassroots communities. Its guidelines are based on the Local Government Code, and DENR Department Administrative No. 9230. The focal point of the entire process is the optimization of experiences and insights. The project inputs, however, will be expanded to other secondary cities of the country.

L-EMP is an application that involved an application of activities as a Sustainable Cities Programme Process Framework. It has three phases, in which the first Phase is the Assessment and Start-Up; Phase 2 is the Issue-Strategy and Demonstration Projects; and, Phase 3 or Institutionalization and Replication.

Working Group Characterization

In Cagayan de Oro City, by 1999 the LEPM Staff during its 1st phase was under the supervision of the City Administrator's Office. Finally, in 2001 the unit was lodged under the special projects of the City Environment and Natural Resources Office (City ENRO). The first major official act of the city mayor regarding the LEPM project was issuance of Directive No. 501-99 organizing the L-EPM project staff composed of a project manager and a core of 15 personnel handling the technical, training and administrative work. Accordingly, the random selection was based on the qualifications and experiences of the persons.

Furthermore, individuals as well as organizations were urged to participate in the process:

- The *Academe*, which included the two major universities of Cagayan de Oro – Xavier University and Liceo de Cagayan University;

- *National line agencies* – DENR, DOST, PAGASA, DOH, LTO, COWD, HLURB, LTFRB, DILG, MARINA, PNP, NIA 10 CUSTOMS, PPA, DAR, MARO, Coastguards, PCUP, BFAR and DECS;
- *Local Government Unit* – CHO, CPDO, CMO, PIA, CVO, CPSO, APO, etc.;
- *Barangay Units*;
- *People's Organization* – CFARM, GUSAFA, Home Owners' Association, Market Vendors' Association, Garbage Pickers' Association, Muslim Association, etc.;
- *Non-government Organizations* – CART, ANGOC, etc.;
- *Business and Industry* – Nestlé Phil., Coca Cola, Pepsi Cola, Del Monte Phil., CEPALCO, Cagayan Corn Products, Minergy, CDO Lumber, Metro Cagayan Oil Mill, CAPRICOR, 1st Asian Metals, Pryce Gases Inc., Rural Transit, etc.;
- *Professional Group*;
- *Religious Group*;
- *Private Group* – Siam Broadcasting, Sabal Hospital, Cosmopolitan and Bollozos Funeral Homes.

With the organized unit, a leader of the so-called manager would be the one in charged of overseeing all L-EPM activities. The job of being LEPM Project Manager (PM) was given to the Supervising Agriculturist for the Agricultural Productivity Office. His credential included his experience related to environment management activities. He was a head of the Task Force Subangan, an environmental watch dog created by the City Government under Executive No. 44-96. He was also a former Project Manager of the Regional Resource Management Project.

On December of 1998, an inception seminar was conducted by PMCU and LCP to introduce the EPM project to the heads of offices of the city government. After this seminar, the LEPM project implementations went into full speed starting on the 1st Quarter (January to March) of 1999. The first priority of the Project Coordinator preliminary to the implementation of the project was project staffing. For the Project Staff, the first regular position to function was technical staff for statistics (later Research and Development). The first major activity of the Project Staff was the data collection for the development of the City Environmental Profile (CEP).

By the 2nd Quarter of 1999, LEPM staff decided to realign its organizational arrangement and adapted the Function Matrix. The matrix had a structure that have four major functions - Training and Organization Development; Administrative Logistics; Information Management System; and, Operations. The adoption of the structure achieved flexibility in addressing highly dynamic nature of secretariat work, despite the insufficient number of staff.

CHAPTER 2

Improving Environmental Information and Expertise

Identification and Mobilization of Working Groups

After accomplishing the staffing needs of the project, the LEPM Project Manager subsequently attended to the pressing need of identifying and inviting the stakeholders and partners. During the 1st quarter of 1999 the team spent most of their time conducting staff meetings because of the delay in the release of funds at the PMCU. The discussions principally focused on setting up and the implementation of LEPMU activities particularly the anticipated processes of consultations with the stakeholders.

In the identification and mobilization of working groups the first question among the LEPM Staff was: 'how shall we identify our stakeholders?' The initial response was to preliminarily relate people into environmental groupings. The LEPM Staff were all strangers to the process; or, what kind of grouping shall be adapted – by ecosystem, or issue-based. So far, the opinion of the group considering the following grounds:



L-EPM Orientation

- a.) Identify stakeholders basing on the ecosystems that we found in the book of the Philippine Agenda 21;
- b.) On the point of view of environmental profiling, the grouping is compatible with our attitude which looked upon environment having natural divisions;
- c.) Various issues are highly crossed-linked, need to have broader scope, permanent approach. The process was anticipated to be difficult; it would be foolish to repeat the process again with other issues that emerge;
- d.) There was no environmental profile yet (nor have any idea how it would looks) to guide the stakeholders to the issues to be involved. There was an apprehension many equally important environmental issues maybe overlooked; and,

e.) the interest of some staff to come up with government environmental management policies or measures that has broader and long-term impacts that go beyond the term of the project.

The ecosystems, which would be the basis of groupings, were initially identified as the following:

- 1.) Urban ecosystem (industrial);
- 2.) Urban ecosystem (solid waste);
- 3.) Freshwater;
- 4.) Forest and Agriculture;
- 5.) Coastal and Marine;
- 6.) Air and Water Quality;
- 7.) Mines and Minerals.

The method of identifying the stakeholders required the following:

- a.) Listing from City Planning and Development Office;
 - b.) Mayor's Office;
 - c.) City Tourism Office;
 - d.) City Council's Office;
 - e.) Professional and personal network from communities;
 - f.) Database made by the L-EPM Research Coordinator;
 - g.) Stakeholders personally invited other stakeholders to join the L-EPM.
- The linkages of the Project Manager who was an active member of the Task Force Subangan that was organized with the support of the City Mayor to monitor and control illegal logging activities in the city, played a very substantial role.



L-EPM Orientation

The stakeholders were formally recruited through letters of invitation from the City Mayor. Later, some stakeholders were recruited through verbal invitations of the Project Staff themselves or through the recommendations of some stakeholders. It was always the practice to follow-up invitations a day or earlier through telephone calls.

The sector related to air quality was the first group of stakeholders to have been identified and selected. Thus, the LEPM Administrative Support Staff as project facilitators were also sub-grouped to form a secretariat of presumed sectoral groupings which was by ecological system.

A Briefing Orientation Seminar for the interested individuals/organizations was held on June 1, 1999. The activity was attended by LGUs, national agencies, academe environment related NGOs, and private business establishments. The partners were the institutions perceived to have major roles and interests to pursue in ENR management in the city; for instance, the national government agencies, the city government agencies, large industrial corporations, and universities and colleges.

The 3rd Quarter activities were mainly set for major EPM components:

- a.) Data deliberation;
- b.) Pre-integration;
- c.) Integration;
- d.) Validation;
- e.) City Consultation;

Likewise, the quarter was spent for capacity building. In the month of July, 1999, the trainings were focused on:

- a.) Office procedures;
- b.) Effective communications;
- c.) Technical writing skills;
- d.) Basic computer operation skills.

On June 3, 1999 the Briefing Orientation for Stakeholders was conducted at the same site. The activity was followed sooner by sectoral consultative meetings that spanned from June 11 to June 29, 1999. During the briefing orientations a general overview of the L-EPM Project and the current Environmental Situationer of the city was presented to the stakeholders and partners.

During the sessions as interactions progressed, situations evolved overtime and issues surfaced and the need for the stakeholders to organize themselves surfaced. At final stages the stakeholders decided divide themselves 'by ecosystem.' The stakeholders choose by themselves the ecosystems they felt they should belong. The voluntary involvement was encouraged so that the bottom-up, broad-based, and participatory approach could be implemented smoothly. The outcome was a situation certain groups have much more members than others.

In the initial meetings the working groups selected from among themselves respective sectoral chairmen, and secretaries. The chairmen served both as head, moderator, as well as coordinator with the project support group. Likewise, the process of selecting group leaders was democratic. Every end of workshops they selected their reporter to present the group's output.

The members of the City Trainers Pool (CTP) facilitated the workshop. An L-EPM staff was assigned as documenter for each ecosystem grouping. While the chairmen guided and moderated the flow of discussions, a facilitator was assigned per group to

attend to their activities. Along the process, the stakeholders identified issues and concerns affecting their respective ecosystems. Because they were not able to come up with final resolutions and wind up their discussions during the first meeting, the groups asked the project management another meeting date to continue their deliberations.

Most ecosystem groupings were able to complete their task in two (2) days some did not. What is interesting during this series of activities is the fact the participants were generally consistent in their attendance during meetings. The rapport that evolved, and the consistent attendance of stakeholders (many were heads of respective agencies) during the series of meetings was an interesting observations among the participants.

This assembly of stakeholders representing all ecological sectors of the city was anticipated to compose the LEPM consultative body; government organizations, people's organizations (federation of fishermen's associations, farmers federation, federation of homeowners association, federation of indigenous people, garbage pickers association, etc.), from large multi-national corporations to local enterprises, from hospitals to funeral parlors.

The membership was characterized by heads of organizations or their chosen representatives who have workable knowledge on environmental concerns. Many representatives from the industrial sector were Pollution Control Officers (PCO). Mostly were specialists in the field chemistry and by their rights hold sensitive positions and authority in their respective corporations. Others participants were scientists, teachers, managers, and engineers.

By the end of June, 1999 all scheduled briefing-orientations except the Air and Water Quality Sector were already accomplished. The sectoral meeting of the Air Quality Sector was completed on July 6, 1999. The Air Quality Group under the Urban Ecology was the ecological sectoral that met last (see Table 3).

Among the different ecological sectors mobilized, the industrial sector was the first to have organized. In fact, they were able to hold immediately an informal caucus right after the project briefing. The first official meeting of the Industrial Sector was held on June 11, 1999. The group selected the representative of Del Monte Philippines, Bugo, Cagayan de Oro City as Chair. The Chairman was very supportive to the project. He personally attended from that first day to all of the subsequent LEPM activities including seminars. The group also decided to continue the process with follow-up meetings. In one of the meetings, the group consolidated the issues and concerns that were identified in the previous meetings with proposed appropriate interventions and strategies.

Most of the participants of the Industrial sector were Pollution Control Officers (PCO) of various corporations. So far they have the widest scope of environmental concerns identified:

- 1.) Identification of Environmental Issues & Concerns; and

2.) Strategy and Action planning.

Among the strategies proposed by the Industrial sector were:

- 1.) Waste management (solid, liquid & gas);
- 2.) Environmental protection among the policies and priorities of industries;
- 3.) Monitoring;
- 4.) Green Technology or environmental friendly facilities;
- 5.) Stakeholders consultation, education and information dissemination;
- 6.) Land Zoning;
- 7.) Hazardous Waste Management, particularly concerning CFCs, industrial chemicals and wastes, etc.
- 8.) Municipal solid waste management;
- 9.) Loss of good quality water and air; and,
- 10.) Networking for effective use of waste (industrial waste exchange).

The extent of participation was relatively greater than what was expected earlier by the project facilitators. The contribution and presentation of data, methods improvement activities (particularly identifying management tools), identification of issues and concerns, evaluations, suggestions, clustering and generalizations, data gathering and surveys, advocacy among households and sharing or relaying of information to the institutions were the activities that ruled the days.

By nature of activities undertaken in those series of sectoral meetings or seminar-workshops, that spanned from June 11, to July 6, 1999, the mini-consultations were viewed as preliminaries for the city consultations that culminated Phase 1.



The social burden on scavengers at the city dumpsite was one of important aspects of the solid waste issue during LEPM deliberation.

Information Collection in the EPM Process

The SCP-LEPM Process

The Sustainable Cities Programme (SCP) is a joint program of the United Nation Commission on Human Settlements (UNCHS) and the United Nation Education Programme (UNEP). The intention of the SCP process strengthens the capacity of cities to undertake planning and management. It enables them to effectively manage their natural resources and control environmental hazards. The SCP advocates a significant

advancement in ENR management. It views the natural environment as a resource to be managed sustainably for the benefit of the city. Sustainability in this aspect means the resources will continue to be available on an economically viable and renewable basis as a result of improved environmental management.

Within this context the competing demands upon the environment by various stakeholders must be resolved and equitably balanced to enable strategies and agreements work. The SCP is pragmatic that in real world, its processes recognize that economic vested interest and political processes have considerable influence on resource use and environmental management. The SCP also recognizes the environmental degradation is caused by inadequate management capacity or ineffective governance. It is also recognized what makes the SCP process attractive to city partners is that fact that it is demand driven, with bottom-up approach, and relies on the local expertise where problems are most directly felt, and where solutions are worked out in daily practice.

The process structures of the SCP process are:

- Institutionalization;
- Sustainability; and,
- Efficiency.

Its modalities include:

- Consultative;
- Participatory Decision-making;
- Joint and coordinated implementation.

The major modalities of SCP process among model cities involve consensus building among stakeholders over concrete issues, participatory and negotiated strategies and action plans, and joint and coordinated implementations.

The main reinforcements of the SCP process were: institutionalization, which involves the integration of the activities into routine affairs; replication, to multiply the impact of the programme; and, sharing of experiences at local, national, regional (Asia Pacific Region) and global levels. On consideration of the need for managing competition for natural resources, it strongly follows that the stages next to reinforcing the SCP process (after institutionalization for sustainability) was the promotion of efficiency in extraction and production technologies, or industries.

Technically, Environmental Planning Management (EPM) process is a project within the SCP process. The EPM process has three key phases:

- Phase 1: Assessment and Setup Phase;
- Phase 2: Strategy, Action Planning, and Implementation Phase; and,
- Phase 3: Follow-up and Consolidation Phase. (see Annex 5)

The Phase 1 with a given period of 6 to 9 months has the following components:

1. Identification and mobilization of project participants and partners;
2. Familiarization of project partners with the core EPM concepts and SCP approaches;
3. Preparation of City Environmental Profile (CEP);
4. Initial design of Geographical Information System (GIS)/ Environmental Management Information System (EMIS);
5. Working out organizational structure, work plan, and operational procedure;
6. Organizing the holding of the city consultation; and,
7. Establishing the issue-specific workgroup.

The Phase 2 with a given period of 15 to 24 months includes the following activities:

1. Intensive analysis;
2. Discussions; and,
3. Negotiation within the issue specific working groups.

During this period each of the agreed priority issues would be further elaborated and developed, to reach a consensus on appropriate strategies for those issues. The strategies would then be developed into action plans which could be agreed by the organization and groups involved in implementation. In proper implementation of the SCP process it was important to determine the boundaries between the phases. Otherwise, the timing of activities, or the total execution of the process would become a problem itself.

Key EPM Concepts

The approaches of the EPM Process are the following:

- Demand-driven;
- Bottom-up;
- Indigenous; and
- Up-scalable.

The principles underlying the EPM process were broad functional scope from planning to development of policy support. Consequently, the outputs of the EPM process included information system, issue-specific, strategies, technical cooperation and capital investment project proposals.



L-EPM Staff in LCP Forum

The information in the CEP can be used in a number of ways: establish base line situation of the issue; understanding and analysis of interactions of the issues with other environmental issues and development sectors, and; understanding the role of various stakeholders related to the issue.

At the start of the LEPM Project, the L-EPM Unit was tasked by the LEPM Project Manager to take charge of environmental statistics that resulted from the data gathering and processing. Thus, it became the precursor of the City Environmental Profile (CEP).

The first information comprehensively gathered was the solid waste situation of the city. The compilation and graphical analysis of data were used and presented in a solid waste convention held in Metro Manila. The second data was the urban land use accumulation data. This information was deemed important in assessing the land use in the city particularly on the issues of contention between housing versus food security.

The document used as source of environmental data was the copy of Socio-Economic Profile of the City furnished from the City Planning Office. At the start of the project the CEP was viewed simply as a compilation of environmental data which must be produced to comply with the EPM process. However, the format of the CEP of Cagayan de Oro City was made comprehensive. It included all the environmental situations in the city.

The data collection activity among various environmental related agencies in the city was shifted to a more structured collection. In the outsourcing, the consultant from the PMCU came by and presented the Annotated City Environmental Profile format. Moreover, the attitudes among participants of bringing and presenting their data had both enhanced the awareness of the group as well as the contents of the CEP. These new and additional data were used to improve or update the CEP.

The CEP evolved as a database of basic environmental facts initially derived from SEP. Subsequently, it was expanded and enhanced through contributions of stakeholders in the city during deliberations workshops. The preparation of CEP involved networking, linking-up and partnering with various agencies, particularly the departments of the local government unit. At first, the stakeholders were obviously reluctant to share their data. But then, as the process went by, the data was presented and compared with inputs coming from other groups.

The Geographic Information System

During the start of the EPM project there was already an existing Geographic Information System (GIS) facility at the CPDO. The GIS was introduced into the city primarily to provide capacity to the LGU to locally generate maps and locators to facilitate systematic land assessment taxation. The establishment of GIS was sponsored and funded by the USAID. The application of GIS was further emphasized by the implementation of the Local Environmental Planning and Management Project in

the city during years 1999 to 2001. Thus, the GIS mapping technology were generally based on the digital photos and projected maps. Relative to the environmental management, the GIS Center at the CPDO was originally established for other purposes. In example, real property taxation and land assessment, civil works, infrastructure planning, etc.

On October 23, 2000, the GIS specialists from GIS, CPO held a conference for the EMIS Framework and Strategic Planning. During one of the sessions, the GIS specialist raised the issue of GIS being true to the EPM process; which is a recommended practice in generating maps for community development. The suggestion signified the two most essential actors in this process – the persons who prepare (resource persons), and those who use the information in actual application (consumers).

Processing

In processing data for CEP, many technical aspects considered:

- a.) Conflicting data;
- b.) Estimation and Projection;
- c.) Methodology;
- d.) Expected Output;
- e.) Trend Analysis;
- f.) Missing Data;
- g.) Curve Fitting;
- h.) Limitations.

The need to formulate the CEP was first presented to the stakeholders during Issues and Concerns Integration Workshop. Although the CEP was not fully completed yet at the onset of the project, its contents were partially presented. Subsequently, a cross-connectivity map was created in order to better understand the issues.

As prescribed in the LEPM process, there were two versions of CEP produced: a.) the Popular Version, which was the simpler version, and b.) The technical version. The environmental information found in the popular version was confined only to the five ecosystem sectors. The 1st draft of technical CEP in compiled format, along with the popular version, was distributed only during the first day of the City consultation on December 2, 1999.

The process of developing a CEP also showed distinctive characteristics, respective information updates (freshwater, solid waste, forestry, and fishery) from the CEP. It was presented to various working groups in every gathering. In return the stakeholders, provides information updates to the CEP coordinator to enhance the CEP. This cycle continued from the series of mini-consultations.

The identification and prioritization of issues were based on the information derived from CEP. It was presented visually to enhance understanding and appreciation of stakeholders on the impact of environmental issues.

The stakeholder-contributors did not allow final printing until they were satisfied of their presentation of facts. However, during the CEP institutionalization workshop, the CEP TWG recommended minor revision every three (3) years and major revision every five (5) years.

Impacts

The CEP proved to be important to the EPM process. The impression generated by the CEP participants was that they all wanted their data to be reflected in the proposed profile. It was observed some government generated data (GGD) had lapses. It gained a certain reaction from the participants. This was in fact a source of contentions during sectoral deliberations of issues and concerns.

'Public Generated Data' learned from working with the group showed that not all data from the public can be given focus. However, all the data contributed must be evaluated, consolidated and properly interpreted. Despite of the fact the draft was presented in both popular version and technical version during consultation, the work on the CEP continued beyond the culmination of Phase 1.

Furthermore, the participants were able to understand the impacts of the issues concerns through its trends. For instance in garbage collection, the annual up-trend of solid waste collection showed a increasing demands for facilities, services, collection system and policy support. Likewise, the growing rate of pollution and the collateral resources required for its control.

During the development of CEP, data verification was a very critical job. It was a potential source of contentions between parties due to conflicting information. To resolve this problem, the LEPM staff utilized customized computer software especially designed for statistical analysis. It could compare two sample means, linear projections, interpolations, regression analysis, etc. This software was first applied in the analysis of the data from Smoke Belching operations. The software was found very useful and helped boost confidence in evaluating, validating, as well as settle conflicting interpretations. All these efforts were provided to boost accuracy in analysis and build up credibility during presentations of new information.

The preparation of CEP carried a unique experience in the EPM process. The activities were mainly focused in gathering information that maybe needed by the stakeholders in identifying and prioritizing the environmental issues and concerns. Indeed, the impact of environmental knowledge to the stakeholders manifested the importance of CEP in supporting the EPM process. Furthermore, the learning

experiences gained during the CEP preparation showed its activities could be strongly considered a parallel project and a unique process by itself.

Subsequently, the design of the CEP was expanded as it was expected to be one of important sources of data in preparing Environmental Impact Assessments (EIA).

The seminar was indeed very successful. The concepts of EIA that had led towards the attainment of sustainable development of the city has greatly enhanced and influenced the manner and style of preparation. It also increased the technical capacity and the proficiency in producing the CEP for the city.

According to the observations of some stakeholders, the CEP directly and indirectly played an important role in updating the stakeholders. The information presented in the activities were provided to improve the awareness, or refine the understanding of the participants regarding the environmental situations.

Problems and Constraints

During the process of generating the CEP several problems emerged;

- While the formulating the City Environmental Profile (CEP), proposition papers and the issues and concerns, the need for accurate, updated, and more data cropped up time and again. The sanctity of data as they called it was obviously a demand among the participating stakeholders;
- The agencies who were expected to take lead in providing the data they themselves did not arrive at a consensus on the accuracy of the data presented. We realized the need for L-EPM to strengthen its own database by broadening and widening its network of data sources (who are the partners and stakeholders themselves);
- There were people who doubted the capacity of the Research Coordinator to do the CEP;
- While the acceptance of data was being worked out, there was also the need to advocate among the stakeholders the need to continue gathering and pooling of data. Thus, the stakeholders were obviously holding on and very reluctant to contribute their data;
- There was the need to prepare a standard format in the formulation of the CEP and proposition papers. The stakeholders who were the end users of the material need to agree upon the format.

The CEP preparation took more than a year and went beyond Phase 1 to complete due to some factors, like the gathered data. It was revalidated several times due to some conflicting figures. One example for such problem was agricultural production; the data from the Socio-Economic Profile (SEP), APO, and the Annual Report of the city mayor published by the City Information Office showed some typographical

discrepancies. Once the figures conflicted the sources were revalidated again; the scopes of the information in the CEP were made broad as possible. Another was format. Moreover, all the CEPs contained basic data tables. Eventually, the CEP of CDO contained partial analysis, initial synthesis and graphical projections. The CEP Coordinator deemed it fit in order for ordinary people appreciate the context of the presentation.

So far, the importance of CEP was not fully appreciated. According to reactions of some stakeholders, the procedures for CEP preparation need not be changed. The process had already worked out. Relatively, the following steps were important for the enhancement of the system for generating a CEP. It also organized a TWG composed of representatives of various organizations related to environmental management of the city; as well as a formulation of a standard format for the CEP. Along with it was the adoption of a regular period of submission of information updates. Eventually, the CEP updating through its technical working group was not sustained after the series of planning meetings. One major cause of the problem was failure to attain the needed level of institutionalization.

Agreeing on Priority Environmental Issues

The stakeholders were active in sharing their experiences, observations, analysis, and suggestions. In turn, the activity helped the L-EPM staff in many aspects of the data gathering that was essential to make the deliberation process more effective. The presentations of the prevalent ecological issues were clearly supportive of the topics discussed. They were useful in enriching the deliberations as well as the formulation of CEP. The stakeholders came to an agreement in confronting the matter.



Institutional Framework Activity

The sectoral groups deliberated in identification and prioritization of issues and concerns. There was a set of criteria or guidelines that became the basis of the short list of the priority issues. Moreover, a separate session was conducted, which was attended by the group leaders and the technical staff. The activity was an integration and validation of the identified issues and concerns. In group discussions, conflicting interests could not be avoided. In this case, it was resolved during the plenary session.

In determining the priority, each stakeholder was asked to rate the issues presented according to preference, in which 1 is the highest. Consequently, a matrix was used to add all the rating given by the stakeholders per issue. Finally, the issues with the least sum were considered priority issues. These issues focused on the most basic and common projects that have impact on the ecosystem.

At the end of the series of meetings, it was found out that solid waste was the most prevalent concern. It was an attainable program with technologies readily available. In addition, its strategies were doable or practical. Not to mention that it did not require so much investment. To top of it all, it was measurable and calculable.

The deliberations of Phase 1 culminated on formulation of proposition papers and institutional framework. The other principal planning instrument produced was the CEP. Finally at the end of the integration process, there were seven potential methods that could be adopted as environmental projects:

1. Recovery of municipal solid waste into compost;
2. City coastal clean-up;
3. Artificial reef development;
4. Support project on alternative livelihood for the conservation of CDO watershed;
5. Mangrove rehabilitation and plantation project;
6. Peri-urban organic farming and water management development;
7. Fish sanctuary project.

The process the LEPM Staff developed a practice of exploring anticipated project dynamics as well as issues with prospective sectors, before any project proposal could formalized and initiated. On May 15, 2000 final exploratory meeting with the KAB-UTT and ORODOC towards the establishment of a alternative livelihood project for the Community-Based Forest Management beneficiaries of Dansolihon was held at Bonbon, CDO. The strategy was to lessen dependence of forest settlers as part of protecting the remaining on forest resources in the city.

CHAPTER 3

Improving Environmental Strategies and Decision Making

Clarifying Issues and Strategy Options

The instruments that mostly helped in clarifying issues were:

- The sharing of information among participating stakeholders;
- Presentation of the new information from the CEP;
- The management tools applied during workshops:
 - SWOT analysis, organogram;
 - Cause and effect analysis;
 - Network analysis;
 - Trending;
 - Issue prioritization by focus group.

All these tools which have been contributed by resources persons and project facilitators showed to have effectiveness and importance depending on application. The organogram was similarly the graphical presentation of action profile. Thus, the SWOT has helped much in improving strategies and decision-making. In fact, needs assessments through SWOT analysis was used while the GIS were only presented at the end.'

Likewise, the method of facilitation wherein the workshop involved active group endeavor, the use of meta-cards, and the methodological nature of tools such as SWOT analysis (system of facilitation applied) helped in avoiding conflicts or contentions.

Furthermore, the respective development needs identified by the stakeholders were integrated into the proposition papers presented at the culmination of the city consultation.

One of important lesson gained from the project was the process itself. An effective instrument for conflict resolution and for a harmonious city governance. The long-running LEPM deliberations made stakeholders realized that the culpability of pollution remained a basic responsibility of every resident of the city.

Constraints, Obstacles, and Problems

The EPM process has its number of problems:

- a.) there was no specific instructions or guidelines given;
- b.) there was a repetition of activities;
- c.) the participants were pessimistic of the results.

Likewise it was realized that identification of issues was not enough in addressing the environmental problems. It also required consideration of the economic situation of the area particularly among the underdeveloped communities.

Hence, one of the most pressing problems in ensuring the consistent attendance of stakeholders was the persistent changes in work schedules (to include appointment dates). This problem aroused from the unnecessary delays in the approval of programs of activities or projects.

Considering Resources and Implementation Options

During the implementation of the LEPM project, the main consideration regarding resources was the funding subsidy, and the counterparts committed by the local project partners. The financial support from the UNDP/UNCHS was employed as investments basically to start the environmental demo projects in the selected barangays. Thus, the following were contributed by the local partners in the said developmental activities:

- cash, equipment;
- technical services;
- policy support from the barangays as well as the city government.

On the other hand, the private sector have their own contributions to the project activities particularly the human resources from both personal, family/homeowners, neighborhood, associations, and community participations. The private businesses, and corporations in the likes of Del Monte, Pepsi Cola, and Nestle. also have also generously donated. For instance, empty sacks, sugar bags, discarded pallets, empty drums, juice cans, etc.

Other resources in the form of implementations instruments were provided, such as:

- national laws and regulations;
- city ordinances;
- barangay resolutions;
- advocacy campaigns in various parts of the city that involved the barangays, and other agencies of the city as well as private groups like homeowners associations;
- capability building such as trainings and seminars were given to various associations of stakeholder, and;

- building partnership with other NGOs and private business firms were involved in the implementation of the projects.

Consensus on Strategy Options

Issue specific mini-consultations

A mini-consultation differed from the main city Consultation in two ways;

Mini-consultations

- Substantive and specific to one issue
- Smaller in size and involves only stakeholders affected by the issue, and whose role is directly relevant to a particular issue

City Consultations

- General and covers all issues
- General or multi-sectoral assembly of stakeholders

Mini-consultations usually last for 2 days; with at least one-half of the time was dedicated to group discussions with participants working in tightly structured (formal) sessions to achieve concrete purposes. The activity was proven useful to three purposes: Elaborating and clarifying issues; Reviewing and refining draft strategies; and, Agreeing on modalities to ensure implementation of the strategies.

The Proposition Papers (PP) were normally prepared before consultations were conducted. The PPs were provided as framework and key content for discussions during the consultations. It also served as a background paper that highlights and analyses the issue.

To ensure the success of mini consultations it was important to identify carefully a capable and reliable person to write the proposition papers and provide detailed outline in writing the proposition paper.

Maximizing the use of the City Environmental Profile

As a source of vital information, the City Environmental Profile (CEP) is designed to provide general information and initial analytical overview. The CEP as an important information tool it also provides an overview of development activities in a city and their interactions with environmental resources and hazards; put in the context of urban management systems and situations.

The information in the CEP can be used in a number of ways: establish base line situation of the issue; understanding and analysis of interactions of the issues with other environmental issues and development sectors, and; understanding the role of various stakeholders related to the issue.

To use at maximum the CEP, set of issue-specific extracts can be then circulated to work group members and those involved in the mini consultations to support the clarification process with additional information and details particularly base line surveys and issue specific profiles as well as apply simple analytical techniques.

The City Consultation

The city consultation was the culmination of Phase 1 activities. The basic purpose of the city consultation includes: Raise the level of awareness and understanding, locally and nationally, of the key urban environmental issues; Confirm the identity of stakeholders and consolidate their role in the SCP Process; Achieve a consensus on the priority issues to be tackled; Obtain a commitment on the SCP process, and to a general work programme, as well as a commitment of participation in that process and to begin the process of establishing Working Groups and other working procedures and mechanisms in the overall SCP process.

The city consultation must be carefully structured and organized, combining plenary and small group sessions. It also included utilizing modern presentational methods and techniques of consensus-building and participatory dialogue. It was founded and consolidated the work done during the earlier stages of preparation and activity, in which led into the next stages of work. The conclusion of city consultation was generally summarized in a 'declaration' to which the participants commit themselves.

The principal outcome of the City Consultation that served as the culmination of the phase was basically proposition papers. The formulating strategies and action planning came in during the Phase 2. Thus, the decision-makers were regularly involved in each step of issue clarification and strategy formulation.

What basically guides the assembly in identifying strategic options were the goals set by respective work groups, which was all in all necessary. However, the exercise was deemed effective; because the process promoted understanding of differences in perspectives of stakeholders. They have learned to realize a lot has to be done.

Promoting stakeholders participation was not an easy job. During the process of identifying and deliberations of issues and concerns, the goal of developing strong commitments among the participants gave a lot of worries; some stakeholders complaint of the instruction setbacks. To the point of view of LEPM Staff this situation threatens the pursuit of promoting a broad-based participatory consultative process. Worse, at

this point of time, relatively, all members of LEPM Staff had no idea what is LEPM all about.

The strongest motivation according to a member of a working group was their desire for knowledge, as well as wanted to experience an important planning process. The exercises were all about environmental issues and concerns. The stakeholders wanted to know the current environmental situation of the city. Although, some of the members had undergone some trainings related to environmental management from the DENR, this was the first time for the majority of the stakeholders to participate in planning and decision-making for the city. From this feedback, it was shown that the trainings, seminars, and workshops as well as learning travels provided by the project. It has also provided an immeasurable incentive to boost participation and commitment.

In terms of costs, the members shouldered their own travel expenses, and more than that, even the fishermen, the farmers, and the businessmen from the private sector, have to sacrifice their time, work and most importantly income just to attend to the meetings.

There were stakeholders by virtue of their positions or role in the process as being resource persons, chairs of the various ecosystem sectors, or leaders of their respective associations their names become a byword to the LEPM activities.

The participation of the following became outstanding to the minds of the LEPM Staff. Individuals who provided unyielding support to the implementation:

- Head of the PAGASA-CDO, the representative of Pepsi Cola Phils.;
- The representative of Nestle Philippines;
- The President of the Federation of Tribal Associations of Cagayan de Oro;
- The Director of the Safer River Life Saver Foundation;
- Chairman of the Solid Waste Group, Barangay Bugo Councilor, Chairman of the Marginal Farmers Association;
- President of the Garbage Pickers Association;
- Representative from the Biology Department of Xavier University;
- Executive Director of the Safer River, Life Saver Foundation, Inc.(SRLSFI);
- President of the Fisherfolks Federation of Cagayan de Oro City;
- Chairman of the Chemistry Department, Northern Mindanao Polytechnic Colleges;
- Representative of the Cagayan Capitol University, the representative of Cagayan de Oro Power And Light Company (CEPALCO).

There were many schools invited in the initial activities, only Xavier University and Liceo de Cagayan University endured with the exercises. There was an initial exploratory negotiations made in 2002 with the representative of the Cagayan Capitol University in the field of enterprise development wherein the institution will get involved in strengthening the garbage pickers association as a cooperative. Likewise, and initial discussion with the Chairman of Chemistry Department of Northern Mindanao

Polytechnic State Colleges (NMPSC) was also made in 2002 regarding linking with Colleges in the field biochemistry and vocational industry.

In interacting with the stakeholders, the behavior of the LEPM Project Unit as a group evolved into a level that the commitment of one staff became the commitment of all. This situation and level of trust given by the Project Management to its subordinates provided a high degree of flexibility to each member to initiate actions that were needed by emerging situations, or call of duty. This flexibility has proven later as a critical factor in allowing the L-EPM Unit to pursue partnership building activities with local academic institutions for the subsequent projects.

It must be remembered always that during the Phase 1 all the coordinators and members of the Project Unit had not received any training on Stakeholders Participation.

During the process, the relationship of the LEPM Project Staff with the stakeholders was always guided by the following rules:

- a.) Let the people know the facts;
- b.) Let the people get involved and organized;
- c.) Let the people identify real and specific issues;
- d.) Let the people prioritize issues according to relevance, scope, magnitude, practicability, and immediate impact;
- e.) Let the people formulate their solutions;
- f.) Let the people open this window of opportunity to extend help, or call for help from each other; and,
- g.) Let the people sustain their connectivity to each other.

During that series of mini-consultations, the deliberations, evaluations, agreements and formulations of strategies were characterized by free-wheeling, democratic discussions of issues and concerns. Everyone was given all the opportunity to speak their ideas and sentiments. There were indeed some 'bloody intellectual confrontations' to reckon.

At the end of the deliberations an issue prevail the most – solid waste. The bases were: Integrated Solid Waste Management (ISWM) technologies were already available; the strategies were doable or practical and not requiring so much investment, and the escalation of problems and related impacts were forecasted.

It was during the 3rd Quarter of the year when the pre-consultation deliberation was on full swing. On Sept. 22 to 23, 1999, Issues Integration Workshop was held at the city. The workshops were conducted to initially integrate and produce a unified list of issues among the various sectors. The task was undertaken by a Technical Working Group composed of all the chairmen of all the sectors and the EPM technical staff.

On October 7, 1999, the subdivision group of Solid Waste Sector made a survey of all subdivisions in the City of Cagayan de Oro and gathered basic type of information.

This LEPM activity prototyped an activity of a group of non-government environmental stakeholders to be funded by the city government.

On November 11, 1999, a Consultation Organizing Team (COT) Workshop was held together with chairmen of various Ecosystem Sectors and the City Trainers Pool. It was held to streamline coordination as well as establish working arrangements for the City Consultation. On Nov. 12, 1999, the City Consultation Presentation and Participatory Skills Workshop was held as a follow-up of previous City Consultation preparation activity.



A LEPM TWG preparing for the forthcoming City Consultation.

The LEPM Project Staff felt the preparation to be inadequate as needs emerged from time to time. On Nov. 23, 1999 a Consultation Organizing Team Updating and Critiquing Workshop was held together with the CTP. The said activity was followed by a working group consultation with the same group on Nov. 23, and 26, 1999. On December 1, 1999 a dry run of City Consultation was conducted by the LEPM Project Staff, CTP and participating stakeholders at Gardenia Guesthouse.

An initial series of neighborhood level seminars on solidwaste management particularly waste segregation was held from November 27, 1999 to November 28, 1999 in the barangays of the city: the Villamar Subdivision, Iponan; Melecia Homes, Macasandig; Villa Trinitas, Bugo; and, Xavier Heights. The seminars were joint activities of Federation of Home Owners Association and various city government agencies such as City Public Services Office, City Public Health Office, and City ENRO. It was the CEC who led the activities assisted by the Chairman of Solid Waste Management Sector, and the representative of CHO. According to the President of the Homeowners Federation by that time, there was no need to involve other stakeholders outside the Working Group because they usually sought them out.

Holding of the LEPM City Consultation was expected by the Project Staff to be a very complicated job because no one among the group has the actual experience doing such. Even the EPM consultants from PMCU and LCP could not categorically prescribed preparation specifics. On this situation, the EPM group seized up upon the advice of L-EPM specialist from PMCU the need to organize a Consultation Organizational Team (COT) to oversee the entire preparation for the consultation process. Chairpersons of the ecosystems, members of the CTP and the members of the EPM staff composed the team. Roles and responsibilities of the COT were clearly identified. A team building seminar was conducted to help make EPM team facilitate efficiently and effectively the city consultation.

During the COT workshop, membership of the core group for the City Consultation were classified accordingly and provided with set of roles and responsibilities:

- a.) Over-all Coordinator;
- b.) Resource Person;
- c.) Facilitator & co-facilitator;
- d.) Documenter;
- e.) Administrative.

All throughout the city consultation process the guiding concepts observed by the LEPM Project Staff included:

- a.) identifying and involvement of stakeholders;
- b.) awareness of environmental issues and concerns;
- c.) allowing people to identify issues and concerns without reservations;
- d.) let stakeholders prioritize issues according to their impact and workability (practicability);
- e.) let the stakeholders themselves formulate resolutions, and subsequently needed strategies and action plans; and,
- f.) consolidated results of deliberations and plans, and continue connectivity with stakeholders.

The deliberations over issues and concerns were made by sector. It was a common process among sectoral groupings that issues identification and prioritization came first, and then the process for integrating the outputs would follow. After the series of sectoral meetings, all the partners and stakeholders were called for a one-day session to integrate all the outputs of the ecosystem groups. We aimed to present these outputs for deliberation and integration. From this activity we hope to: a.) Validate the draft City Environmental Profile b.) Draw the proposition Paper per sector, and c.) Identified Projects. Along this line, the technical writer met with the different sub-sectors in different occasions to discuss the revisions and add more information to the draft paper.



A view of the CdO LEPM City Consultation.

The issues were prioritized in accordance to the criteria introduced to us by the Senior UNCHS Adviser:

- a.) Magnitude of health problems;
- b.) Loss in urban productivity;
- c.) Contribution to alleviate poverty;

- d.) Degree of irreversible outcome;
- e.) Degree of unsustainable consumption – scarcity;
- f.) Non-contentious - facilitates general agreement;
- g.) Non-political nor identified with any political agenda or group;
- h.) Demonstration of technical/institutional/political sustainability.

In order to validate and integrate the prioritized issues and concern, a separate session was conducted. The process proved to be tough because of the interdependency of each issue to other sub-systems.

The holding of the four-day City Consultation in the first and second weeks of December 1999 was considered the capping activity for the Phase 1 of the LEPM Project. The activities were broken-down into four-day sessions in recognition of our stakeholders and partner's need to report to their offices at least three days per week, instead of taking leave of absence four days in a row.

Through the help of the CTP, the briefing for the city consultation activities was conducted smoothly. During the consultation, the stakeholders and partners were able to present their Proposition Papers per sector, initially draw the Institutional Framework for the entire program, and presented the City Environmental Profile, and Consolidate the Prioritized Issues and Concerns.

While the prioritized issues and concerns, proposition papers and formulation of institutional framework were consolidated, finalized and submitted. However, no in-depth and final agreements regarding institutional arrangements were completed. Furthermore, there was the difficulty in threshing out the role of the L-EPM Unit in relation to various environment councils, associations and related organizations in the city.

CHAPTER 4

Improving Effective Implementation Strategies

The context of strategy and action planning of the L-EPM process in the city as a matter of circumstances actually materialized during Comprehensive Land Use Plan (CLUP) preparations. The CLUP preparation was in fact the formulation of a comprehensive strategy, action planning, and the integration of said proposed environmental management and development interventions into the in the city development through the 5-year City Investment Plan.

In the 3rd Quarter of the year 1999, environmental management issues and concerns were incorporated into a policy support level. Moreover, there was a policy from the national government requiring all LGUs to submit respective Comprehensive Land Use Plan (CLUP) before their Internal Revenue Allotments (IRA) should be released. According to regulations, the CLUPs must be prepared under the technical supervision of the HULRB. At this point of time, with the proposal of the City Planning and Development Office, the LEPM Unit decided to underwrite the activities of conducting public consultation for the CLUP. It was also decided the LEPM Staff were to assist as members of technical working group for the CLUP.

Preparation for CLUP has started as early as August 5, 1999. On this day, the LEPM Staff was identified as part of the technical working group for the City Land Use Planning. The TFC and the CEC attended a meeting with City Planning Department and discussed on the selection of EPM stakeholders as participants for the forthcoming CLUP activities.

On Aug. 19, 1999, the first orientation briefing and consultation for the CLUP was conducted in. The subject of the event was the negotiations for the determination of environmental strategies for CDO. The discussions covered the formulation of visions, and missions of CLUP. By nature of activities undertaken, the series of sectoral meetings or consultations-workshops that spanned from June 11, to July 6, 1999 were in fact mini-consultations according to the SCP manuals.

On January 3 to 7, 2000, a Training for Environ. Planning & Mgt. For Sustainable Development was held. The seminar was supported by DENR-10. The activity was focused on matters related to staff from various government line agencies briefed the LEPM participants on many matters related to environmental management.

The first quarter was filled with activities related to the CLUP. On Jan. 12 to 13, 2000, the formulation of City Environment Action Plan Workshop was conducted. The said workshop was designed to orient the LEPM staffs cum Technical Working Group for

the environmental sector of the CLUP on formulating city environmental strategies and plans. This was the first time since the Housing and Land Use Regulatory Board (HLURB) has integrated the environment sector as one of the main areas of interest of CLUP. The seminar workshop was facilitated by CPDO. Along the initial process of having a more detailed strategies and inputs for action planning, discussions among groups of participants provided opportunities in identifying ecosystems that needed to be further developed. To fully appreciate the progress of preparing the CLUP, there was a follow-up activity on January 15, 2000 titled interfacing EPM with the CLUP for the finalization of City Environmental Plan. The efforts of CPDO and LEPM team were combined to facilitate the seminar.

The following were series of seminars and workshops were conducted relative to CLUP and demo projects:

- On January 17-21, 2000, an Environmental Management Seminar was conducted by various government environmental agencies (EPM partners), HLURB, DENR-Forestry, MGB, DENR-Geosciences, and many more. The topics covered important issues related to the preparation of CLUP.
- On February 2-3, 2000, an activity Briefing on Phase I Activities and Management Tool and Planning Workshop for Phase 2 was held. The meetings were chaired by Chris Radford, an EPM consultant from UNCHS. The meeting was a review of the three model cities LEPM performance and other issues.
- On March 2-3, 2000 another seminar workshop for Environment Control Planning Seminar Workshop was conducted. This activity, then, was followed by a seminar titled Management Tools for Strategic Planning and Control. And, a seminar discussion was held on March 30 to 31, 2000. All activities focus on the strategies for the future project.
- Despite of the abovementioned developments, the LEPM Staff themselves were struggling to systematize the EPM process. On Feb. 15-16, 2001, a Preparatory Workshop on Projects Mechanics was conducted to formulate a work arrangement between participating partners. On March 21, 2001, a conference to establish linkages among key partners as well as environmental management-related groups/organizations.
- On March 23, 2001, a seminar on ISWM for Market Vendors Association facilitated by the L-EPM staff and the CEC. On June 27 & 28, 2001, the Re-orientation Seminar for ISWM of three demo Barangays was conducted, with the participation of the barangay stakeholders and L-EPM Staff. On the other hand, the fishery sector has a brief orientation on RA 8550 on June 15-21, 2000. Hence, it was participated by the Fisherfolks Association of Cagayan de Oro.

- After a series of consultations in the 2nd Quarter of 2000, a seminar workshop titled Presentation & Finalization of City Environmental Plan was conducted on March 29 to 31, 2000. The meeting was in connection to the preparation of the environmental plan for the Environmental Sector of the CLUP. The seminar was facilitated by the City Planning and Development Office (CPDO).

Agreeing on Action Plans for Implementation

During the CLUP activities, several management tools were introduced:

- the Strength, Weakness, Opportunities and Threats (SWOT) Analysis;
- the Organogram (was introduced by Chris Radford during one of his previous visits);
- Problem Tree;
- Objective-Oriented Cause and Effect Analysis (an innovation of Problem Tree Analysis).

The whole exercise, which has in effect, refined and enhanced the planning structure of the city EPM as well as the provided a venue for a more systematic review of strategies produced during city consultation.

The analytical processes introduced provided opportunities to identify demo projects to be established for effective alleviation measures. The seminars were held as a venue for discussions, which were designed by the Coordinator for the Statistics and CEP. It was found out that it was significant to standardize approaches and concepts on strategies, goals, and objectives as well as generating organograms. Various sectors and actors were also identified for the different ecosystems.

Aside for considering these instruments as standard tools for preparing CEP, and CLUP, the other intention for the seminar-workshops was to further provide opportunities for its application, review and assessment of the integrated and prioritized issues and concerns. Moreover, management techniques were shared with the participating stakeholders so that potential interventions and prototypes could be explored.

The planning activities were helpful in clarifying some emerging misconceptions on some issues and concerns. Hence, such latest data became the basis to further equip or strengthen the stakeholders. This would pertain to relevant planning techniques and capabilities for any upcoming CLUP activities. In its output activities, it provided opportunities the identification of ecosystems that need to be enhanced. Consequently, it ushered more detailed and comprehensive action planning activities.

The choices of seminars simply reflected the training needs of the group. During these periods, the activities were focused on generating an environmental

management plan for the city through the CLUP. In these situations, the resource persons from HLURB as well as staff from CPDO imparted their learning insights from various local and foreign trainings. During this time the need for decision tools to assess environmental issues and concerns was strongly felt.

On March 2-3, 2000, an activity for Environment Control Planning Seminar Workshop was organized. This activity was followed by another seminar titled Management Tools for Strategic Planning and Control. Some important tool introduced was like the Strength, Weakness, Opportunities, and Threats (SWOT). The seminar-workshop was conducted to strengthen capabilities of key stakeholders to identify specific areas of environmental issues and concerns, and address focus for applying mitigating measures, as well as possible projects to be introduced.

It was in these series of seminar workshops that the SWOT analysis was introduced to systematize the formulation of CLUP Strategic plans. The activities resulted to a much more deepened discussions and analysis of environmental management strategies. Likewise, the generated Problem Trees of different environmental sectors were further structurally analyzed and evaluated using the related analytical tools introduced.

The end product of the CLUP was the city investment plan. The action plan was manifested in the form of a body of priority projects that had significant impacts to the environment. It was with these series of workshops that the stakeholders were involved in an actual urban development planning. It involved strategy formulation and the 5-year investment plan of the city that was integrated into the CLUP. The participants maintained similar ecosystem groupings in both strategic and action-planning sessions. The same groups of stakeholders were involved in both strategic and action planning. Thus, both components were worked out in the relatively same consultative setting.

Looking into action profiles at framework levels, the more specific manifestations of action plans were the MOAs that stipulated legal commitments. The people involved in MOA formulation were always those who were directly involved in the agreements. For instance, the LGUs, which could be the barangay or the city; and, NGOs (particularly academic institutions). It was recognized that these local partners have respective capacities. Formally, groups were represented by the presidents of associations or federations.

At strategic planning level, action profile for the city LEPM ISWM project would involved three major organizations, the city, barangay, and the Garbage Pickers Association. In such case, the city would provide infrastructure and policy support. The barangay would provide frontline services for implementation. The garbage pickers would provide services for solid waste collection and segregation. Hence, the involvement of the garbage pickers was not solely known as voluntarism. The LEPM staff wanted as well to probe the effectiveness of the idea of sustainability through free-

market environmentalism. Thus, the garbage pickers must be able to generate profits from the endeavors.

The principle of free-market environmentalism would be integrated in such a way that the GPs would earn income along the process by acquiring the recyclable materials at free-market prices.

At first, the scheme of simple segregation without urban agriculture (composting of biodegradables) and employment of garbage pickers was initiated by a subdivision group. Yet, complaints of residents rise over remixing of segregated garbage during hauling. The problem on sustainability started to emerge. Residents were discouraged, and later, the legal significance brought by RA9003 put the ISWM activities under the political responsibility of the barangay.

At implementation level, action profile was generally defined by the stipulated preambles or agreements of contracts, or goals and objectives of the projects proposals. The action profile at the barangay level followed the general action profile pattern. The principal actors were the CPSO and the barangay (barangay council, committee on environment, health workers, and garbage pickers) had respective characteristics which varied from one barangay to another.

Likewise, Project monitoring was performed in the same manner. However, statistics on participation, comparative outputs, and levels of response of target sectors were made to be more specific on these bases.

Reconfirming Political Support, Mobilizing Resources and Reinforcing Interventions

For the LEPM Staff mobilizing resources define no boundaries. They grabbed every opportunity to advocate the SCP/EPM process. On July 26, 1999 the Project Manager, with the assistance of L-EPM Unit, oriented the City Council on Local EPM.

There were two major approaches for an effective mobilization of local resources that were derived from the LEPM process: Networking or partnership building, and Reinforcing interventions by technology sharing. The idea of partnership building was introduced into the group during Project Mission of PPPUE. The meeting was initiated by top UNCHS officials. Thus, it was attended by the chairmen of various LEPM working groups.

The mode for PPPUE strategy developed from LEPM experiences was initiated with the extension of technical assistance to our partners and stakeholders particularly in the area of project development. This would include:

- developing skills for preparing project proposals;

- giving sample project proposals, information sharing with the CEP;
- creating some educational modules or handouts. This mode was followed by reinforcing interventions through technology sharing and capability building.

As experienced, there were several strategies for mobilization that emerged from the process:

1. Scaling up the scope of the EPM process to other communities or other areas of endeavor would range from ISWPM to food security with urban agriculture. Coastal marine and fresh water conservation through forest protection and conservation has also become a consideration;
2. Partnership building with the private institutions likes Xavier University and Liceo de Cagayan University.

Partnership building has proven again and again from Villa Trinitias, Bugo ISWM and community gardening project, to Barangay Gusa Self-Sufficiency Program. The CDO-AU and GOFAR Project became the prime pillars for institutionalizing the EPM process.

The processes of establishing partnership with other institution build up structures for institutionalization. The first type of partners was the academic institutions, which were selected due to affinity in interest for advocacy. So far partnership with the Xavier University in the field of agriculture (like the CDO-AU Project PHI 3-17) was already done. Liceo de Cagayan University became an anchor institution for the replication of EPM (GOFAR Project). Consequently, LEPM Staff had been waiting for opportunity to build partnership with the Cagayan Capitol University in the area of small-scale enterprise development, and with Northern Mindanao Polytechnic Colleges in the area of biochemistry and industrial technologies. These institutions through their representatives were considered EPM stakeholders and had been with the project since its beginning on June, 1999.

The LEPM project worked with the Save the Mother Earth Foundation (SMEF) of BPI in the field of value formation among school youths. The activities which included educational trips, seminars, outdoor activities, and 'Basura Tours' of dumpsites and other related areas, were focused on environmental consciousness particularly Integrated Solid Waste Management. For such intent the LEPM staff prepared a kiddie Solid Waste Brochure for the collaboration. The LEPM Staff also gave samples of applied project proposal to the foundation manager.

By October 2002, the L-EPM Unit prepared a draft project proposal for a solid waste project among elementary schools of the city emphasizing segregation. In this case, there was an integration of environmental education at the elementary and secondary levels. The prospective partners of the proposed project were the Department of Education, Culture and Sports (DECS); the garbage pickers association; the

Department of Environment and Natural Resources (DENR); the City government and the SMEF. The LEPM Staff was also able to help link the SMEF to the JICA by that time represented by its consultant for SWM. The 'Basura Tour' for students was always accompanied with free snacks donated by a large fast-food chain in the country. The foundation in collaboration with the LEPM Project conducted the tour in August 14 to 15, 2001.

3. Policy support is an important component of the EPM process. It involved the application of existing laws, regulations, local ordinances, agreements. Similarly, it sustained the practice or execution of a particular process, practice or system.

Policy Support Development was a set of activities which handled the developmental phase of local government policy support structure. Particularly, the creation of proposed city ordinances and related policies. Policy support involved three types of activities:

- a.) Direct involvement in preparing the local ordinances;
- b.) Supporting activities involved in formulating local ordinances attending council or committees meetings, promotions and other activities; and,
- c.) formulation or preparation of the City Environmental Code.

The LEPM ISWM through the instructions of the CLENRO, who also was the Chairman of the City Solid Waste Management Board (CSWMB), had presented twice to the Board meeting since it was created on was on August 17, 2000. The board was formed in compliance to the newly promulgated RA 9003, otherwise known as the Ecological Solid Waste Management Act 2000 of the Philippines.

The presentation involved the issue of viability of implementing the SW segregation to the barangays. In addition, it also showed the result of survey conducted regarding the acceptance of SW segregation among target households. The outcome showed the people were generally willing but required training and related technology.

On April 15 2002, CLENRO tasked the LEPM staff to review, enhanced, revise, and finalize a proposed city ordinance. An Ordinance Making the Mandatory Segregation of Waste At Source. On July 18, 2003 the final draft of said proposed ordinance completed and reviewed. By November 16, 2003, the proposed ordinance was passed and promulgated by the Cagayan de Oro City Council.

On July 18, 2003, the LEPM unit prepared and submitted the final draft of the proposed Memorandum of Agreement between the city government and a local advertising company. It was for the installation of illuminated modern segregation garbage bins on the streets sidewalks of Cagayan de Oro City. The segregated garbage bins were integrated with aesthetically designed lighted advertisement boards.

Aside from making the private firms responsible for the upkeep of the lighted garbage, the said installations were likewise designed to enhance the promotion of local

tourism and business investments in the city as well. This type of garbage bins, which was an innovation of the roofed garbage bins in Bangkok Thailand, was installed in *divisoria*. The prototyping promoted sustainable urban development through free-market based environmentalism.

4. Capability building in form of in the assistance extended to potential partners. Major recipients of technical assistance extended by the LEPM unit included the Barangay Council of Gusa, Save the Mother Earth Foundation, Buhing Kinaiyahan Organization (BKO), Barangay Bugo and Safer River Life Saver Foundation (SRLSF). They intended to generate community projects proposals, linkages and related programs. For instance, BKO was organized in 2003, which was reported to be active until this date. It has reportedly extended technical and physical support to the ISWM of Barangay Bugo particularly on Villa Trinitas.

Since August 22, 2001, the EPM Project L-EPM Unit has been voluntarily collaborating with the Safer River Life Saver Foundation, Inc of Liceo de Cagayan University. Its initial interest was the institutionalization of formal training program for environmental management as well as process. The SRLSF became one of lead partners of the city in implementing the GOFAR Project in the city.

In the month of November 2003 the PM and the LEPM staff has collaborated with lead members of PAGA, professional community developers, and key personalities of Barangay Bugo in the organization of BKO. A community-based environmental organization formed primarily to assist the ISWM activities of the city particularly barangay Bugo. BKO has the following objectives:

- a. establish strategic partnerships with the government agencies and private sector for accessing of resources such as technology inputs and funds to support the solid waste management endeavors of the barangay;
- b. help the beneficiary communities, through their barangay leaders/officials, to become aware and actively involved in environmental conservation/preservation by providing sufficient information and education on ways to manage solid waste;
- c. promote social mobility among the marginalized garbage pickers by providing long-term economic opportunities;
- d. assist the LGU in the efficient delivery of basic services at the barangay level, namely: food security; sanitation; health and home economics; gender responsiveness; and, home improvement.

Experience from the EPM project showed the institutional factors that influenced that outcome of resource mobilization included:

- a.) *Political recognition*. Some stakeholders confessed they felt compelled to participate in the exercise because they received an invitation from the office of the mayor;

- b.) *MOAs*. The partnership agreements obligated the parties involved to execute the said joint endeavor in full force;
- c.) *Collaborations during project development planning*. It was natural to see parties involved in conceptualizing the project eventually became lead partners, who were strongly committed to make the collaborative endeavor a success;
- d.) *Awareness*. When the stakeholders started to appreciate the intention and the benefits of the demonstration project, they had extended their personal or family resources to facilitate the outcome. Although these stakeholders were individuals, they also represent various institutions in the city;
- e.) *Legal provisions*. The compulsory compliance of RA9003 and the city ordinance mandating the segregation of garbage at source became a burden in enforcing ISWM in their respective barangays. The LEPM consultation process and the preparation of Environmental Impact Assessments (EIA) were requirements for the issuance of the DENR's Environmental Certificate of Clearance (ECC). Thus, it manifested the capability of CEP to influence mobilization of economic resources as well as the development of the business sectors among LGUs.

The project initiation, development and implementation also showed to be significant social factor in mobilization. In the case of CDO-AU Project proposal, Barangay Gusa ISWM Project was discussed with the LEPM Unit their respective development concerns. Subsequently, there were recruitments with all the prospective key actors to a project conference. After the project was approved, the Project Unit interpreted the proposed mechanics.

Without the inspiration of the rest of the LEPM Staff and ground-level advocates in Barangay Gusa: the Project Manager, UAC, ISWM2, the Barangay Chairman, the Chairman of the Committee of Environment, the Barangay Gusa Community Organizer, and the presidents of the fishermen association and the members of Health Workers of the Barangay.

Factors of Sustainability

There were several factors that have significantly influenced the outcome of the resource mobilization process:

- a.) realization of stakeholders on the urgency of the demand and the commonality of interest to preserve the environment of the city;
- b.) mutual organizational and personal benefits the stakeholders cum partners gained from the common endeavors;
- c.) voluntary endeavors of the EPM specialists from the Project Unit to sustain the EPM process networking with private institutions.

The synthesis and validation of information Workshop served as the culmination of the LEPM Demo Cities Project in the country, specific activities of LEPM Demo Cities project formally ended in 2001.

The LEPM process showed to have left a strong impression in the community of stakeholders because the concerns, ideas and resolutions shared among the LEPM participants. It remained as seeds of collaborations as well as a professional bond among them.

The nature of interactions that was casual and simple indicated the legacy of the deliberations over environmental issues. The LEPM process must have impressed the people involved in its activities. As the Phase 2 activities went along, there was a growing demand for improvement. The participants were encouraged and aspired to address other identified environmental issues.

Demonstration project: up-scaling and replication

It did not come into the minds of the Project Staff Group that introducing the demo projects would address totally certain issues in the city. There were approximately 40 urban barangays in the city. However, the real issue the demonstration project addressed the viability of implementing solid waste segregation within certain parameters and according to the R.A. 9003. The collateral gains of modeling included the identification of the exact mixture of methods and support policies. It acquired effective exercise. The strategies that tapped local resources had enforced or integrated sustainable development.

As an approach in development, the experiences gained from demo projects provided knowledge among participants particularly those barangays officials the formal and popular approaches in mobilizing local resources. In effect, they had appreciated the knowledge that gained from the LEPM process has brought; that in totality EPM was an effective approach to strengthen political tenure.

Actually, there never was a Phase 3 in the LEPM project as the funding support. The phase was withdrawn due to certain problems in demo cities project implementation. The 3rd Phase that happened in 2001 in Cagayan de Oro City was actually phase emulation, supported basically by a budget extension of Phase 2. The realization of the projects in the Cagayan de Oro City was actually a matter of smart budgeting skills of the PMCU people. The intervention was made because the local stakeholders particularly the barangays have already made initial demo project preparations for Phase 2.

The minds of the project participants were set already looking forwards for an eventual completion and success of the LEPM project. In this condition, the LEPM management could not afford to lose such precious hard-earned rapport and confidence of the locale to the EPM process; considering the confidence building among citizens who was reluctant at the start of the project. This apprehension led to a realization that process-based development project could be a difficult implementation as far as the matter was concerned.

Without the Phase 3, *The Follow-up and Consolidation Phase*, the project would lose momentum and eventually suffer a natural death. All the ISWM demonstrations in barangays were merely initiated and had not reached a level of institutionalization or 'social maturation'.

Making Efficient Use of Resources for Effecting Change

Eventually, some members of the Project Staff opted to continue the struggle and find for opportunities to realize the final Phase (3) of the SCP/EPM process. The biggest obstacle however, was finding funding support. The fiscal inadequacy was even more accentuated by the fact that the local government has no explicit policy support for Research & Development much more on community development. Considering the difficulty, the only potential resources remaining to initiate Phase 3 were those local resources among the Barangays units, the private individuals and the NGOs. So far, the only option remaining to mobilize such resources through the SDCP/LEPM process was partnership building or PPPUE.

The CDO-Asia Urbs Project

Since the start of the CDO LEPM Project the PUVEP has been interacting with the project management in the field of academic agricultural support. Hence, the city EPM Project Unit had been preparing proposal together with the PUVEP team of Xavier University on projects related to urban agriculture and solid waste organic composting. The LEPM Staff positively viewed this mutual interest as a rich ground for culturing collaborations. At a certain point of time, the collaboration made a proposal that was submitted to Asia's Urbs Programme establishing an agricultural joint project between the city government and Xavier University.

Eventually, the LEPM unit was tasked to modify the said project proposal and converted it from a mainly agricultural development endeavor into up scaling the EPM integrated solid waste management activities among the three demo barangays. The project design was a result of the following influences:

1. The urgency to continue the initiated projects among the demo barangays. The EPM demo project in the city was cut short. Phase 3 was eliminated, and the barangay people were already poised for the next stages of community development with the integrated solid waste management;
2. To continue the development of environmental GIS and EMIS/CEP. The CEP has attained only the final draft stage during Phase 2 of LEPM project but was not finally published. In terms of completing the EPM learning process, among

the components of the EPM process, the final development of GIS and CEP was the weakest link.

3. The concerned LEPM project staff needs to experience and learn a.) the dynamics of partnership building through Public Private Partnership in Urban Environment (PPPUE) particularly between government and NGOs, foremost with academic institutions; to have basic appreciation of the dynamics of operations of the academic institutions particularly the universities (how they operate, their strengths and weaknesses, relative to the typical industrial corporations), and b.) to assess the feasibility of having these two seemingly 'contrasting' organizations work together, and;



Briefing the LEPM vegetable farmers in the installation, utilization and upkeep of the drip irrigations systems.

4. to test the efficacy of the principles of free market environmentalism. There was the foremost need to strengthen the waste segregation. The processes could even generating income, promote savings and profitability among project participants. Likewise, the urban agriculture must be strongly established to create institutional end users for the recycled biodegradable garbage.

The project was designed with three impacts: urban environmental planning system (GIS), clean environment (ISWM) and urban food security (allotment gardens). Likewise, the project was intended for social alleviation of the following target groups: garbage pickers, Low income, households, and LEPM project stakeholders.

Finally the project proposal was approved under the title GIS-based Urban Environmental Resources Management and Food Security Project (PHI 3-17). Although the project title was thematic to GIS, the bulk of activities in implementing the project was focused on Integrated Solid Waste Management.

The CDO-AU Project project was a multi-party endeavor of the city government of Cagayan de Oro through the CLENRO, Xavier University Cagayan de Oro; Schelklingen City, Germany; Dinant City, Belgium, Facultés Universitaires Notre Dame de la Paix (FUNDP); Geography Department, Namur City, Belgium; and, Albert-Ludwigs-University, Section Applied Physiogeography of the Tropics and Subtropics (APT), Freiburg City, Germany. The project as designed was a model for PPPUE is typical of a multilateral collaboration among governments and academic institutions.



A neighborhood food production scenery in Villa Trinitas , Bugo under the ISWM bio-waste composting

The urban agriculture component of the project implemented through barangay allotment gardening activities, as intended in the project design is collateral (or integral) to the ISWM activities. However, because of the natural complexity of the ISWM having a significant connectivity to social change, the bulk of the learning experiences in the project implementation remained on the triad of organizing, segregating, and gardening aspects of ISWM in three demo barangays.

Allotment gardens areas were those urban lands provided by the government for common and participatory cultivation of the community. Its concept, although seemingly related to the Green Revolution in the past, was mainly patterned after the German experience. In the Philippines this concept was akin to community gardening.

On June 3, 2002 a 1st Coordination Meeting with Foreign Partners (Schelklingen and Dinant) was held in Cagayan De Oro City. The symbolic signing of the MOAs by partner cities was held in this occasion.

On February 14, 2003, the CDO-AU Project in Bugo was launched in Villa Trinitas Phase 3, Bugo. On March 17, 2003 the CDO-AU Project was presented to Barangay Lapasan through a Project Orientation Seminar.

On April 30, 2003, the solid waste segregation at Villa Trinitas was first practiced through the LEPM process in the city. Finally, the strategies and practices regarding the ISWM conceived during the LEPM Phase 2 was actually achieved. On September 11, 2002, the CDO-AU project was presented to Barangay Gusa, Cagayan de Oro City.

The CDO-AU project has brought many innovations needed by the LEPM Staff to enhance the ISWM implementations the past CDO-LEPM Project failed to implement due to loss of Phase 3:

- In the Villa Trinitas neighborhood, the Integrated Solid Waste Management with all its three components; segregation, recycling, and disposal was practiced for the first time at household and neighborhood levels. The Bugo activities were useful as guides to the other two model barangays;
- The bucket-type gravitational drip irrigation system was applied in consideration for promoting primarily efficient water management, and then the sustainable urban agriculture. It was with this technical parameters each allotment gardener was provided with an area of 400 sq. m. per participant only because of the technical limitation of the system being a gravity type;
- The technology for composting at household level using composting drums patterned after Sri Lanka experience was effectively applied. This strategy was proven quite a doable alternative to address the absence of a centralized city-level solid waste segregation and composting facility;
- The availability of fresh nutritious vegetables (being organically grown), and the economic gains from savings, or selling the yields, or the social benefit or psyche input from sharing with the needy neighbors has strengthened

smooth relationships among neighbors. These were the collateral benefits of the projects the participants explicitly expressed;

- The fundamental motivation for the people to observe the required solid waste management practices was the enforcement of sanctions, laws and regulations, and equally the economic benefit is doing such.

Regarding the urban agriculture component, on September 23, 2002, a two-day Allotment Gardeners Training was conducted for the allotment gardeners to 3 demo barangays (Lapasan, Gusa and Bugo).

The Philippine Allotment Gardeners Association (PAGA) was organized and composed of by the recipients of the allotment gardening activities of the CDO-AU Project (also ground-level partners of LEPM). The project gardening site is located in Villa Trinitas, Barangay Bugo. The community allotment gardening was a component of the ISWM activities.



Huddling to prepare a community map during the CDO-AU project in Barangay Bugo.

The more important benefits brought by the CDO–AU project in the city was the justification to their previous theory that:

- a.) free market-based solid waste segregation at household level could be feasible;
- b.) promotion of urban agriculture through community gardening is an essential component to make ISWM particularly segregation truly attainable; and that,
- c.) local resources are adequately available in developing socially significant local community development project provided the proposals were feasible, practical, and tremendously beneficial to all the participants involved.

On the other hand despite of the project title which indicated focus on GIS, the final revision and publication of the CEP was not realized because the project management support was explicitly downgraded, and the allocation was estimated inadequate. Indeed, the project funding support was focused to agriculture.

Another important project development technology innovation brought by the CDO-Asia Urbs Project was the community mapping. This community based participatory mapping activity which in contrast to the popular concept of EMIS as a school of thought at high places, basically rely on hand-drawn sketches of the locals (without the benefits of modern high technology hardware of more popular GIS. This innovative experience boosted tremendously our local concept of sustainable development regarding local information management by formally recognizing and making use of the

crude quick maps as materials for EMIS/CEP. The concepts of community mapping has been implemented for quite some time among the indigenous people in Bukidnon and brought to the CDO City LEPM Staff through the CDO-Asia Urbs project by the Environmental Science for Social Change (ESSC) an NGO based in Malaybalay, Bukidnon.

On January 29 to 31, 2003, a workshop on Community Mapping was conducted in Barangay Bugo, Cagayan de Oro City. The participants included the working groups for Allotment Gardens, LEPM Staff and as well as the GIS staff from the Planning Development Office (CPDO). By October of the same year, Barangays Gusa and Lapasan have undergone CM sessions facilitated by the GIS team led by the GISC (now married).

On October 24, 2003 the GISC met with a representative of the Gusa Barangay Council Acero on mapping of Barangay Bugo facilities and utilities. On 30th of the same month they met again on mapping of proposed projects and programs. These activities demonstrated the significant impacts of GIS on the development of barangay units.

The GOFAR Project

Regarding the institutionalization of the EPM process, it has been experienced with some researches and local development projects, most adversities encountered particularly in the process of integrating the impacts of the project to the social mainstream of the local community were attributed to the difficulties of local governments in appreciating the dynamics of change being brought along by the projects. This experience was similarly encountered during the initiation of the 3-year Local Environmental Planning and Management (LEPM) demonstration project in the city and observed as well as by many projects worldwide.

To initiate measures to address this issue, the idea of building up the barangay units as the engines of political and social change through formal training under government scholarship grants have come-up. The idea was to formally train key officials and personalities of barangays whether on a diploma, bachelor, or master's curriculum on SCP/EPM process and principles of good governance and sustainable urban development as advocated by respective agencies of the United Nations. It was a highly considered in the project design, on the basis of LEPM project experiences in the city, which the local (or barangay) officials who were trained formally on the principles and concepts of SCP/EPM became its staunchest supporters and advocates.

Likewise, it was mutually prescribed that the training to more relevant and realistic, must be supplemented with introduction of catalytic barangay environmental demo projects which by virtue of the principles of sustainable development, must be financially and politically supported by the barangays themselves and the national government. This could be done by requiring a project development counterpart from the concerned barangay as a requirement for training. The existing Internal Revenue Allotment (IRA), administrative budgetary provisions for environment as provided by the

local government code of the country, and other international funds could be used to support these replications programs. These political interventions however must be anchored to the most appropriate political institution in the country, the Department of Interior and Local Government (DILG).

The GOFAR project is an initiative of the DILG. The collaboration among the CDO city through the LEPM Staff, the DILG, the UNDP, and the SRLSF in the development of the GOFAR Project has started since 2002.

The LEPM report of the city submitted by the L-EPM Unit to UNCHS and presented during the 4th Asian Mayors Forum held in Bangkok, Thailand in year 2001 was instrumental to the development of design concepts of the GOFAR Project. As far as the city LEPM Staff is concerned, the project which is led by the DILG is an epitome of PPPUE, and a product of years of interactive networking among development oriented institutions.

On June 12 to 13, 2003, representatives from the DILG and LCP met with the LEPM Staff members at VIP Hotel, Cagayan de Oro City and discussed about the LEPM project in the city. That said conference attended by the Assistant Secretary of DILG, Executive Director of LCP, and the UNDP Resident Manager was connected to the assessment of accomplishments and current status of the CDO-LEPM Project and the possible dynamics of implementing the proposed GOFAR Project in the city.



A work scene during 4th Asian Mayors Forum in Bangkok, Thailand

This was in this occasion the Chairman of the LEPM Industrial Sector categorically stated that one important reason for the stakeholders to have continuously supported the LEPM process despite of its termination in 2001 was the demonstrated commitment and dedication of the LEPM Staff. This reaction was also stated in a report on the LEPM demo cities project prepared by PMCU, DENR in 2001.

A week following after the meeting, the EPM unit prepared a concept paper as point of discussion between the DILG and the SRLSF. These kick-off points were important issues particularly the dynamics of partnership and more so, on the role of academic partner in knowledge management in the LEPM replication project. These parameters would determine finally the performance and the



Participants from various countries at the opening session of Global Meeting 2003, Alexandria,

success of the project. The context of the concept paper was already agreed in principles during the previous conference. In the initial stages of the development of the GOFAR project, the supportive role of UNDP and UNCHS and the DILG were very crucial particularly in threshing out of hitches and realigning arrangements that otherwise would have threatened the initiation and direction of the project.

On September 29 to October 2, 2003, the LEPM staff and the SRLSFI attended the "Sustainable Cities Programmes/Local Agenda 21 Global Meeting 2003", Alexandria, Egypt. During the 1st plenary session, the LEPM Unit as a resource person presented the GOFAR Project. The theme of the conference was "Environmentally Sustainable Urbanization" Developing Environmental Planning and Management Capacities for Poverty Reduction.

Tracking Effecting Change

On a higher plane, the demo barangay projects played important roles as principal venues for affecting change.

In the implementation of the SCP process the LEPM Staff did not confined their interventions to the EPM process alone; they also diversified towards strengthening and cultivated partnership building with local organizations to establish joint projects particularly with anti-poverty components to make efficient use of available resources. This was in one way or another related to the process towards sustainable development. What is more interesting is that after all those myriads of events, the CDO LEPM project was able to return an amount of approximately P100, 000.00 to the PMCU.

It was also interesting that while issues and concerns were being deliberated at the EPM plenary halls, the EPM facilitators and stakeholders continued their consultations among those prospective beneficiaries. It was as early as July 13, 1999 that the LEPM Staff has been meeting with the scavengers at the city dumpsite (later renamed Garbage pickers) of the LEPM Solid Waste Sector and the PUEP group regarding a large volume conversion of biodegradable waste into organic fertilizer. A follow-up coordination meeting of the same groups regarding this intent was held on August 20, 1999. During this time a prospective agreement for conversion of biodegradable solid waste with Agri-Cycle a contracting group from Sagay, Negros Occidental that fabricated the hammer mill was being mulled.

The management component of CDOEMSDP has launched the following demonstration projects in the city:

1. City-wide Coastal Clean-up Project. Among the planned demo activities, the Coastal Clean-up by CDO fisher folks federation was the first to have been initiated. This activity was conducted first by the group on January, 2001 and being done thereafter until this date.

2. Recovery of municipal solid waste into organic fertilizer. On February 15-16, 2001, Training on Drip Irrigation was held. On March 14, 2001, the Project Briefing on Garbage to Fertilizers Project was facilitated by the L-EPM. The briefing was intended to familiarize as well as update the participants of the LEPM on the status of the solid waste project. This project led to the acquisition of the hammer mill. On March 23, 2001, a conference with Market Vendors Association on Roles and Functions on Bio-degradable Composting was conducted. A follow up Seminar/Workshop for Technical Working Groups for Market ISWM was held on June 14 & 15, 2001.
3. ISWM – Gusa. Launching of solid waste demo barangay projects was held in Gusa on June 5, 2001. The ISWM launching was held at 3 Demo Brgys with the participation of the CENRO, Committee on Environment, Barangays Officials, Health Brigade Youth of Bugo, LEPM Stakeholders and L-EPM Unit Staff.
4. ISWM – Lapasan. The barangay solid waste demo project for Lapasan was launched on June 15, 2001.
5. ISWM –Villa Trinitas, Subdivision Bugo. The barangay solid waste demo projects for Villa Trinitas, Bugo was launched of on June 28, 2001.
6. Support Projects on Livelihood Alternative for the Conservation of Cagayan de Oro Watershed Area. The installation of the drip irrigation system and planting of vegetable seeds for the KABUTT group was on May, 2001.
7. Mangrove Rehabilitation and Plantation Development Project. A Hands-on Training on Fish Sanctuary/Mangrove Plantation was done March 1 to 6, 2001. The planting of prop gules s for mangrove forest was implemented in August 26 to 27, 2001. The Mangroves Plantation and Development Project was officially launched on September 12, 2001. The proponent fisher folk group was the Nagkahiusang Gagmay'ng Mananagat sa Bulua. The CEC was tasked to coordinate for the activities.
8. Peri-Urban Organic and Low Volume Water Management- based Vegetable Production Demonstration Project. On March 27-29, a 3-day live-in Seminar on Compost Making & PERI-Urban Vegetable Production was held in Appropriate Technology Center was conducted. The training seminar for selected CDO farmers was focused on the application of organic fertilizers that would be generated from the city garbage. Hence, the Delivery & Installation of Individual Irrigation System for Peri-Urban Organic Vegetable Production Project was on March 1, 2001. This idea of a project of converting the biodegradable solid waste of the city into organic fertilizers for urban vegetable production of city farmers was raised on July 13, 1999. An On-



Inspecting garbage bags during dry run of ISWM segregation at Barangay Gusa.

Site Agronomic Training on Crucifers Vegetables was conducted on June 4-8, 2001.

9. Pilot Barangay Fish Sanctuary Development Project. The Fish Sanctuary Project was launched on April 1, 2001.
10. Pilot Barangay Artificial Reef Development Project. The Artificial Reef Project was launched on March 1-6, 2001. On that same event a Hands on Training on Artificial Reefs was conducted. The project was launched right after that MOA was formally signed by the city mayor.

One of the important gains from the project as observed was that the LEPM process was instrumental for conflict resolution for harmonious city governance. The long-running LEPM deliberations made stakeholders realized that the dangers of polluting the city remained basic responsibility of every resident of the city; not of a particular group or individual.

The private industrial corporations like Del Monte Phils. has also provided drums for garbage composting (for PAGA activities), disposed pallets for building ISWM segregation facilities, Pepsi Cola for discarded empty sugar bags for coastal cleanup and ISWM activities, and Nestle Phils. for handed-down computers for environmental management special project facilities, of private persons the lands for MRF and community gardening activities of the three demo barangays, all these voluntary contributions were token of all-out economic support that can be obtained through the LEPM process.

The successful development of the ISWM and the Self-sufficiency Program of Barangay Gusa through the LEPM process provided insights among top city officials the potential capacity to implement significant political change and impact at barangay level without the all-out fiscal support for the city political leadership. This insight is reflected by the current desire of key personalities in the city administration to upscale the Barangay ISWM experience all throughout the city.

Although the direct beneficiaries of these aforementioned activities were the demo barangays and the city government Cagayan de Oro City in recapitulation, the final beneficiaries of all these developments are the citizens of Cagayan de Oro City in general.

Parallel Development Activities

The activities of the LEPM Project Staff and stakeholders in pursuit of the SCP process were not confined solely on the implementation of the EPM activities. The Project Staff were outreaching their networking to all environment related NGOs, which were willing to join hands in enhancing the EPM process in the city. On October 19, 2001, LEPM established a partnership with Save the Mother Earth Club of Bank of the Philippines Islands (BPI). The focus was environmental education among the school

youth. In joint efforts, together with DECS and CLENRO through LEPM, the Basura Tours was conducted; wherein, the elementary and high school youth were being oriented about integrated solid waste management.

On the group's initiative a technical regarding Standardizing Procedures Preparation of Project Proposals was held at the CENRO. This was a quick seminar on how to prepare the solid waste project proposal. The participants were the EPM technical staff, the CLENRO administrative officer, and the training staff. Simultaneous to the CLUP formulation, the LEPM process continued to develop. The role of Barangay Council was recognized as important because the projects were to be installed in their respective jurisdiction. The identification of the 3 Pilot Barangays (Lapasan, Gusa and Bugo) was primarily based on their active and dedicated participation of their representatives in all activities of series of consultations. The three barangays showed as well their enthusiasm and deep interest to implement the project.

The implementation of an EPM project was a hands-on participatory process. As a popular democratic political process, it advocated a transparent and bottom-up approach decision-making. The principal mode of delivery of this type of development was advocacy and people's participation. Hence, the main measure of accomplishment would be a change social attitude among the target groups. The effective pursuit and justification of the project objectives within the bounds of expectations of people made the implementation of this type of project very difficult. It explained why the participatory process-based development should be treated a separate category of community development. Along the implementation of the LEPM Project, major adjustments on planned work schedules were made due to emerging needs. On September 18, 2000 the PMCU staff with LEPM Staff conducted a one-day workshop, which revisited the Phase I of the LEPM process.

In actual project development, preparing the project proposal was one important matter. It needed full-fledge technical training or orientation. Furthermore, the preparation of the Memorandum of Agreement (MOA) was another matter of equal importance. The writing of the proposal required a well-thought project design. Nonetheless, the writing of MOA needed a well-projected anticipation of the impacts of the agreement to the prospective demo project partners.

On October 3, 2000 the drafting of the MOA for the Cagayan de Oro City Environmental Management and Sustainability Development Program (CDOEMSDP) was done by the LEPM Unit through the assistance and review of National LEPM representative. The MOA has three major implementation components which served as an umbrella program for the demo projects: management (how will the environmental program be implemented); strategic (how the objectives be achieved); and, development (what are the impacts of the project).

The draft was later submitted to the CDO LEPM working group for review, restructuring, and approval. In terms of project design, the advantages of an umbrella project were:

- it required only one approval;
- sustainability was highly facilitated. The project could easily be converted into a regular program of the city by a policy support (city ordinance);
- integration and monitoring of various work packages or sub-projects under a single management program. Demo projects would easily be facilitated, simplified and systematized.

CHAPTER 5

Institutionalizing Environmental Planning and Management

Strengthening System-Wide Capacities for EPM

Institutionalization should be the product all the efforts in the EPM process. Like the training, education, modeling, capacity building, promotion, policy building, collaborative planning and so forth.

Strengthening the LEPM capacity of the city started with the capacity building of the LEPM Staff. During the project period the LEPM Staff enjoyed the opportunity of having attended a good number of trainings, seminar and workshops.

In June 25 to 26, 1999, a Financial Orientation Seminar was conducted in the city by the Finance Officer of the PMCU. This was to orient the implementing working groups on the economic aspects of the project. It involved how to handle the funds acquired, if not allocated for the project.

A Training Needs Assessment Seminar was led by the PMCU Training Consultant in June 28-29, 1999. The activity focus on the identification of the required training inputs as well as instruments, which would be used in the conduct of trainings along the process.

In July 20 to 23, 1999, the PM undertook the Training Course on Environmental Management conducted by Orient Integrated Development Consultants, Inc. This training was held in UP Los Baños, Laguna.

In Feb. 22 to 25, 2000 the PM attended the Environmental Technology Assessment in Makati City. The seminar was sponsored by the United Nations Dev. Programme International Lead Management Center.

In May 7 to 11, 2000, a Seminar on Video Production organized by the PMCU for the LEPM Unit was conducted. Another resource person from PMCU spoke for the occasion.

In July 12 to 16, 2000, a seminar workshop on Process Documentation was held in Baguio City. The seminar was facilitated by a consultant for process documentation. It was conducted with the intent of recapturing and validating the lessons and experiences learned in the first phase of the SCP EPM process. Issues on the preparation of process documentation were discussed; particularly, the documentation lapses and the suggested format.

In August 9 to 11, 2000, a workshop on Presentation and Validation Workshop on Technology on Stakeholders Participation was held in Quezon City.

In August 28 to September 2, 2000, the ISWM1 and the Project Manager attended the Integrated Solid Waste Management Seminar-Workshop in Cebu City. The experiences gained from this seminar were fully utilized in educating the school children during the Basura Tours Project of SMEF of BPI, Inc.

On September 19 and 20, 2000, a training-workshop on Social Marketing Information and Education Campaign was conducted. The activity was attended by the CEC, the IECC, representative from CPSO and the Barangay Gusa Info Officer. The seminar was sponsored by the province of Misamis Oriental.

On September 27, 2000, an Annual Review of the SCP LEPM Project Phase 1 was held in Batangas. This activity was attended by the Project Manager, the ISWM1 and the L-EPM Unit. The Chairman of the Industrial Sector, the President of Homeowners Federation, the representative of Xavier University Biology Department and the Director of SRLSFI also went along. Unfortunately, the activity became the cancellation of the Phase 3 of the project.

In October 2 to 9, 2000, a 5 -day training on Project Cycle Management a system was immediately conducted after the annual review in Olongapo City. This activity was a requirement of NEDA in all government projects.

In November 14 to 16, 2000 the GISC went to attend the EMIS Conference held in Manila. Subsequently, same activity was conducted in Cagayan de Oro City in July 6 to 10, 2000. The seminar was participated by 7 EPM staff. It was a lecture/workshop on the basic methods on GIS. One idea emphasized by the resource person was the application of participatory mapping which has a special bearing on LEPM process. The resource persons were composed of GIS specialists from Lipa City and Cagayan de Oro LEPM.

In Dec. 4 to 6, 2000 selected staff of the LEPM Staff went for a Cross Visit to Bohol.

In Dec. 20 to 21, 2000, the EPM technical staff attended Team Building Seminar held at Quezon City.

On Dec. 22, 23 and 26, 2000, the Entrepreneurship, & Project Development Seminar was held to develop skills in preparing project proposals as well as enhance capabilities I Project Design. On Dec. 27, 2000, a Monitoring and Evaluation Workshop was conducted. On January 14, & 21, 2001 an orientation workshop for the IEC Pool concentrated on Training and Production Workshop in Journalism and Visual Design was also conducted. The formal IEC activities of the project started with the training seminar/workshop titled Training & Production Workshop on Journalism for IEC Pool of Lapasan, and Bugo held on April 3 & 4, 2001.

City Sharing and Cross-visits

Strengthening the LEPM capacity was not confined only to trainings, orientations seminars, and workshops. Sharing of experiences was made at various levels that included city sharing, cross-visits and individual sharing. Consequently, the LEPM Staff has been active also in participating in city sharing activities.

In May 4 to 6, 1999, the CDO LEPM Staff attended the City Sharing on Phil. Agenda 21 in Butuan City. The activity was sponsored by the League of Cities in the Philippines, and the LGU of Butuan.

In Dec. 8 to 16, 1999, all the EPM staff went to attend the League of Cities of the Philippines Sharing on Local-EPM in Puerto Princesa, Palawan. The presentation of the CDO LEPM Staff was titled 'Connecting the Fragmented'.

On May 9, 2000 the L-EPM staff went to Manila to have a meeting with the management of Sagip Pasig Movement. The movement's management showed their process of tapping community organizations in some barangays. A video clip was presented on the activities promoting solid waste segregation and recycling. They also went to the Metro Manila Linis-Ganda Inc. in Quezon City to gather some knowledge in the business of recycled materials.

In August 15 to 18, 2000, the LEPM staff attended the 24th LCP City Sharing Workshop in Butuan city. The seminar workshop sponsored by Leagues of cities of the Philippines and facilitated by GOLD. Its purpose was the review and validation of the SCP/EPM process. The activities were conducted in view of replicating the SCP process to other candidate-cities of the Philippines.

Institutionalization Build-up

Institutionalization of LEPM into city governance, like CEP, could be viewed a distinct project with a set of measures. These would be equivalent to strategy formulation, action-planning as well as implementation. Relatively, institutionalization at the barangay level does not end up only in making an organization or assembling a group of people. It also involved the integration of set of actions into the system of local governance. At barangay level, action planning varied from one barangay to another, although there could be commonality among them; in example, the mobilization of Barangay Health Units into the ISWM activity. There would always be a distinct organizational setup and system of work.

Institutionalizing Broad-based Participatory Approaches to Decision-making

Institutionalization relative to the principles of SCP signifies structured, systematic integration;

‘To be absorbed and integrated into the institutions and organizations in the city, with the SCP ideas being accepted and acted upon.’

The effect of said institutionalization process included the elements of the SCP/EPM process. It was then integrated into routine activities of various organizations and interested groups. The practices of LEPM would be carried on and sustained without being dependent on initiatives of special projects.

During the 1999, city consultation and the LEPM stakeholders formulated an institutional framework for the city's environmental management, the key components included:

- Comprehensive database system that described in details the environmental situation of the city. The City Environmental Profile could provide a comprehensive approach towards initializing a continuing process of identifying issues and concerns for policy and operational action;
- Cross-sectoral consultation meetings organized as a joint effort of the local EPM and sub-sectors concerned to regularly validate the data in the CEP and identify other issues and concerns as they occurred in a given point in time;
- Prioritization of the issues and its classification according to policy. Whether it could be valid and doable in a given underlying circumstances;
- Laying the groundwork for a medium to long-term strategic plan to map out strategies and goals in ensuring a continued and sustainable environmental management program;
- Development of measurable action plans per sub-sector with corresponding investments required based on the strategic directions set and agreed;
- Coordinating and integrating the action plans to develop a comprehensive approach towards achieving a strategic environmental management framework.

Proposed Structure

The organizational structure and institutional framework basically provided the action-profile for institutionalization. For the City LEPM, the organizational structure was proposed to ensure effective implementation of goals and work programs:

- a.) The Project Steering Committee;
- b.) The LEPM Staff;
- c.) The Technical Working Groups;

d.) The sub-committee task force.

The above institutional framework was designed to meet that the following conditions:

- Establish an institutional approach in managing an environmental program;
- Encourage full participation from stakeholders, private sector and government agencies in the implementation of policies and program plans of action;
- Create an integrated, comprehensive and systematically-organized database on the city's environmental situation. Such profile will be used for information and policy-decision purposes;
- Develop the city's capacity to implement a sustainable environment management program.

There was a failure to establish a timeframe. In the formulation of the institutional framework during the city consultation no timeframe was provided obviously because of the apprehension, and reluctance that: a.) the people involved in this project were generally new to the SCP-EPM process, and that almost all including the LEPM Project Unit has yet to grasp its concepts; b.) those who were representing the city government, which was anticipated by the stakeholders to have the pivotal role, belong to the middle management level representing the department heads of the city government; and that they themselves has to champion and undergo some sort of lobbying to inject and champion the structural changes advocated by the EPM process; c.) there city has just newly underwent a change in political leadership (1998 elections) such that the priorities are obviously on the state of leveling off, and the general political atmosphere normally was 'wait and see'.

At the project staff level, as experienced showed institutionalization strategy based on the EPM experiences required sustainability through up-scaling the activities to a broader scope and greater impact, and establishment of policy support structures. Likewise, this up-scaling process requires advocacy at institutional level, partnership building, networking and linkages.

The advocacy through IEC, demonstration projects, partnership building, and community organizing activities were all part of capability building for the community.

The foremost policy support that gives legal basis to our advocacy for institutionalization of the EPM process was the local government code that mandates the devolution of ENR functions and, provides police powers to LGUs, for *the preservation and enrichment of culture, promote health and safety, enhance the right of the people to a balanced ecology, encourage and support the development of appropriate and self-reliant scientific and technological capabilities...* (Republic Act 7160)

The LEPM project have proven the fact that local resources can be made available and generated adequately for environmental management project or endeavors, provided the stakeholders are committed to the cause. This commitment is

always a function of advocacy supported by relevant information, and intensive education campaign. This experience has likewise been proven by the fact, the sustenance of the catalytic demo projects that have political significance were sustained by the participating barangays. Interestingly, that project who involved NGOs, many resources were provided by the participating beneficiary stakeholders themselves; garbage drums, travel expenses, office supplies, time, materials, manpower, etc. Experience showed the first venue for institutionalization was the community of stakeholders themselves. Experience showed the main need of the ISWM implementations was the system which the LGU has the role to provide.

Project experiences also showed that institutionalization required, the particular organization anticipated by the public to spearhead for the needed services must be structured or formal, and it has the capacity to deliver services actively, as well as function regularly as demanded by the people concerned.

On February 28, 2000 the National EPM Adviser conducted an orientation briefing titled Presentation of Study and Recommendation for the Institutionalization of EPM wherein he discussed with the heads of the Departments the study and proposals for the formal institutionalization of the LEPM in CDO.

The second most significance venue for institutionalizing is the formal integration of the LEPM process in the subsequent CLUP exercises of the city, this could be done through a policy support in a form of city ordinance.

The first formal step made for institutionalizing the LEPM process was the creation of the CLENRO during the first quarter of 2000. Under this policy the group composing the City Anti-smoke Belching Unit and other selected personnel of the Office of the City Administrator were officially repositioned under this office.

Institutional Reforms

Drawing-out experience from the project, the process of institutionalization involved the following activities:

- a.) establishing an association. This activity involves linkages and networking between legal entities;
- b.) officially and widely recognition of the public. It was related to work, activities, or function widely renown or recognized by the general public; and,
- c.) formal organizational placements, work structures and broad-based interaction among participants such that work interaction became customary feature or regular affair (particularly among the barangays, city government and the garbage pickers). This aspect of institutionalization requires economic and policy platform for a concrete support.

During the LEPM Project term there were several institutional reforms related to environmental management in the city; it was 1st time for the CLUP to have an environmental sector; the city established the CLENRO; the city organized the Solid Waste Management Board; privately owned lands utilized for city government environmental projects (community gardening, MRF, etc.) were exempted from additional taxation of unused lands as provided by the local revenue code, and ; the demo barangays provide budgetary allocation for solid waste management activities and facilities.

Institutionalizing Cross Sectoral and Inter-organizational Coordination

There was a time when the proposal of the CDO-AU Project PHI 3-17 was submitted to the European Union Aid agencies, the LEPM staff was informed the said proposal went in conflict with another development proposal submitted by the City Planning and Development Office (CPDO) to the same agency. This incident showed in the absence of coordination, there is always the possibility of conflict between two or more proposals from the city submitted simultaneously to a single donor institution. Thus, the city needs one functional super body that monitors and coordinate all community development activities in the city, it maybe NGAs or NGOs initiated.

However, as far as project delivery is concerned, the city has apparently all the needed administrative structure effectively implement the demo projects. Most particularly, the Barangay Development Council (BDC). This body aside from being a potential platform for coordinative activities for the Association of Barangay Councils (ABC) in the city was one important facility for the demo projects to be strongly integrated and institutionalized into the mainstream of political dynamics of the city.

The aspect of partnership building in the city LEPM process, one lesson learned from the experience; that in every joint endeavor the interests and biases of respective parties concerned must be given utmost weight. Only along this line the objectives of the EPM process can be well integrated.

Once partnership were established the types of joint endeavors and corresponding impacts showed to have crucial influence to the institutionalization process of the coordination. Experience from the demo projects showed that those joint projects with major political impacts such as the ISWM has very high potential for institutionalization. This development could be observed from the resultant barangay resolutions, and budgetary provisions. Likewise this development could be further integrated into the local political picture through policy support mechanisms.

At the end of the EPM process cycle (particularly at the termination of the EPM Demo City Project) viewing our EPM experiences at higher SCP plane, despite of the implementation of the three phases, there remain missing components: a.)

Institutionalization and replication that are needed for a total completion of the urban development process in Cagayan de Oro as a sustainable city. Along this line the build-up of people's demand for sustainability of EPM process and activities was necessary in pursuit of its institutionalization. Thus, partnership building, co-development, and co-management with universities were intensively pursued in the years following.

In the case of demo barangays, after the ISWM project introduced by the LEPM project particularly in Barangays Gusa and Bugo, showed to have delivered some significant political impact, such that the Barangays themselves sustained the activities. It was learned that Barangays Gusa, and Bugo subsequently provided substantial allocations in their annual budgets to sustain the ISWM project thereunto. The other LEPM projects particularly the fish sanctuary, artificial reefs, and mangrove enjoyed similar benefits.

Since August 22, 2001, the LEPM unit has been networking with the Safer River Life Saver Foundation, Inc. of Liceo de Cagayan University in the intent of building up formal training program for environmental management and EPM process. The main mode for this purpose was the extension of technical assistance to our partners and stakeholders particularly in the areas of technology sharing and capability building. These included developing skills for preparing project proposals, giving sample project proposals, information sharing with the CEP, and creating some educational modules or handouts. The R&DC has once served as a resource person to the university faculty during a seminar related to preparation of project proposals.

Anchor Institution

The implementing team for this process was the L-EPM Unit. The unit was being lodged in the CLENRO. The composition of the group was based on the knowledge, skills and experience of individuals within the City Government. Actually, each member belonged to different departments of the said office. Since, they had the right qualifications, potentials and commitment; they were invited to be trained for the specific purpose of implementing the EPM in the city.

The L-EPM Unit was being anchored in CLENRO. The said office was just recently established in order that environmental issues as well as its corresponding projects would be supervised. Along with this supervision was the provision of technical inputs for the adapting barangays.

Furthermore, the principle of anchoring was a resultant of the distinctive problem among organizations involved in local or global development. This concern centers on knowledge management. Some key LEPM Staff were very much worried the developments introduced by the LEPM project would not be sustained; political support to existing projects varied according to the political leadership. Usually they fade away with the change in administration: the knowledge (experiences, and technologies)

gained from the project have nowhere to be deposited, least archived for the future generations to review, enhance, or innovate.

For those who have appreciated the impacts of process, the experiences gained were invaluable as well as potential source of enriching the political culture in the country, particularly in the city, in the field of socio-economic and political development through popular democracy. Moreover, the accessible library facilities combined with formal training on SCP/EPM process, the training center was likewise expected to emerge as an institution of excellence in promoting good governance in the community.

The knowledge developed from the LEPM project underwent a process of indigenized localization. Thus, the experiences through innovations, enhancements were specially adapted to local socio-political environment and are potentially replicable to other LGUs in the country.

During the 4th Asian Mayors Forum held in Bangkok, one of major issues presented was related to the development of Knowledge Management as a tool for sustainable urban development management. While tackling on the issues of sustaining, managing, and sharing the knowledge gained by various development projects or activities, a suggestion was raised L-EPM technical staff during the plenary discussions to tap the local academic institutions particularly the local universities as anchoring institutions in consolidating the development experiences.

Under these circumstances the involvement of a university as an anchor institution to address such need was realized to be crucial in sustaining the LEPM process in the city. Among the universities in the city the Liceo de Cagayan University was found to have more developed training program on environmental management. They have established the Safer River Life Saver Foundation, Inc. that caters to the environmental concerns of the 14 barangays situated along the Cagayan de Oro River, in addition to their existing baccalaureate, and masters programs for environmental management. The existing training programs were potential for integration with the knowledge on the LEPM process and project development.

CHAPTER 6

Making Efficient Use of Resources for Effecting Change

Networking among Cities

One essential instrument found important in promoting networking among cities or municipalities was sharing of knowledge; particularly project development, process experiences, and technology. Potential areas for sharing of knowledge included LEPM Process, ISWM, GIS, CEP, Sustainable Development Training, and Project Development and Design.

Sharing the ISWM Experiences

Since the ISWM projects were established in Villa Trinitas Bugo, and Barangay Gusa over a thousand persons visited the demo areas; political leaders (mayors, councilors, and Leagues of Councilors) from other LGUs or regions (Nueva Vizcaya, National Capital Region), students, teachers, CBOs, local women's groups, the civic-minded, environmental experts, etc.

Gusa as a barangay was able to comply with the SW segregation and other requirements of RA9003 as well as the city ordinance for SWM. As of October 2003 the PAGA members of Villa Trinitas, Barangay Bugo attained a yield level of 300 kilos of tomatoes per 2.5x20 sq. meters garden plot in a 120-day production cycle. Their produce were sold to the nearby market outlets, vegetable traders, and oftentimes shared among their neighbors. The economic benefits of helping the urban poor increase their household productivity through community gardening, and health benefits of consuming fresh and nutritious organic grown vegetables available all the time as experienced by PAGA members and their neighbors must be shared among LGUs throughout the country to bring some impact to poverty alleviation programs of the government; that is after discounting the social and political order in the neighborhood brought by improved household sustainability and food production activities.

Sharing the GIS Technology

During the implementation of the LEPM project, our impression were all those modern technical and very sophisticated accessories of the GIS such as the digitizers, application software (ArcView ®, CAD) , GPS, and wide plotters are indispensable to the success of the SCP/LEPM process. However, we did not deny the fact that cost of

these facilities including capacity building and skills training, are prohibitive to most of the LGUs in the country. For the matter of cost, the extent of echo training to the rest of the LEPM staff was considered inadequate for the participants to fully immerse to this technology. Besides, the knowledge learned from the short training was not enough to attain the level of adequacy in skills without sustained application or constant actual practice.

Despite of these constraints, certain development planning levels among LGUs required GIS technology application. On the other hand, one could not effectively innovate GIS technology towards local indigenous application without adequate understanding of its principles. Relative to EIA requirements, the system is quite useful in presenting geographically the environmental status and critical areas of the city. However, the integral constraints of GIS in terms of maximizing its utilization relative to prohibitive investment requirements need to be addressed. At this point, the needs for pooling of resources among LGUs had to come-in in order to establish a functional GIS. Thus, establishing the GIS technology is a potential area for networking and linkages among LGUs.

Sharing the CEP Technology

The CEP in a foresight plays an important role in the socio-economic development of an LGU. This connection is attributed to the role of CEP to the EPM and the EIA aspects of development.

The CEP preparation as a set of activities, evolved as a distinct and a parallel sub-project essential to the accomplishment of LEPM Project Phases 1 and 2. In consideration that CEP with its full function was an important body of information during City Consultation deliberations, exerted significant influence in the determination and establishment of barangay development projects, as well as a source of essential data in the preparation of IEAs required in the preparation of two proposed bridges crossing the Cagayan de Oro River, CEP proved to be a crucial document in accelerating the socio-economic development of an LGU. Thus, the technology for CEP preparation must be generously shared.

Sharing the Sustainable Development Technologies

Sharing specific technology that can enhance the delivery of basic services, or effect social benefits to communities, or target sectors particularly in the field of poverty alleviation is one modality that can significantly boost networking among LGUs.

One specific example for this approach is in the interest of agriculture (urban or rural). The EPM unit has initiated the development of computer software designed to identify crops specifically suitable in certain areas. The parameters include, global location,

elevation, and type of soil, climate, and cultural food preference. The program is anticipated to increase yield, productivity, and basic know-how of ordinary farmers. With adequate support, this technological project can be completed in a short-while and introduced to the agricultural sectors of LGUs participating in the GOFAR project.

Another example is the promotion through IEC of basic and practical knowledge on family health, nutrition (clinical) and home economics to help impoverished families surmount the ravaging economic crisis in the country.

CHAPTER 7

Conclusion

Lessons Learned

The LEPM Project as process based brought a bounty of experience to key project participants and implementers as far as development, design, and implementation are concerned; seminars, workshops, cross-visits, study tours, advocacy, IEC, participatory planning and consultations, demonstration projects, process documentation, GIS, CEP, management tools and so on.

It was in this experience it was proven that the magic of cross-visits and study tours, and the purpose of trainings, seminars, and workshops attained its true meaning and fullest impact when the appropriate principal actors themselves were sent to participate the event.

The learning-by-doing approach showed to be prone to abuse by lack of expertise. However, hands-on experiences plus academic training enhanced by appropriate facilities and methods were experienced to be essential in pursuing effectively the project objectives. The knowledge gained from the project experiences could be further applied in improving the management instruments introduced and applied during Phases 1 and 2 of the project.

The lack of expertise could be such a grave threat although the development facilitators were ready to respond to the emerging situation, innovate along the process, improvise the existing or create appropriate management instruments.

The local innovations in the field of process documentation (milestones, and journal of insights), management tooling (problem analysis, SWOT, etc.), information management (database software development), GIS (alternative technology, and community mapping), process (ISWM), knowledge management (anchor institutions), institutionalization through policy support, partnership building, linkages, and replication, and so forth, proved to be at the core of implementation and development survival despite of inadequacy in capital and policy resources.

The Project Design Technology gained through project development research has played a crucial role in partnership building between the city and private organizations. This design technology, aside from crash training programs (replication training, seminars and workshops) will be sustained through formal training program of GOFAR.

Building partnership among institutions was one key instrument for establishing active collaborations, and institutional bridging linkages. The development of a formal training program and facilities through the establishment of the Center of EPM Studies in Mindanao as an anchor institution for the GOFAR Project is expected to boost development research, the learning process, and the process of replicating the LEPM process to other LGUs. The replication program of GOFAR designed to enhance, structure, institutionalize, and replicate the SCP-EPM process as wide as possible is expected to be one of the main platforms of urban political development in the country in the nearest future.

In terms of operational features, the difference between the LEPM Unit of Cagayan de Oro City compared against the cities of Lipa and Tagbilaran, was the existence of Research & Development arm. During the EPM project the focus of the LEPM Unit was mostly in the field of methods and improvement of the LEPM process. It was this function the management tools introduced during the project were given the needed attention.

Continued networking and constant prodding of the UNCHS Senior Adviser, the UNDP Resident Manager as well as the LEPM National Adviser meant a lot of difference. Without their backstopping, and support the momentum of the LEPM process could have faded out by complacency.

The organizational structure as essential component of project design has showed its importance in providing the needed flexibility and functionality. Likewise, with the supportive attitudes of the core LEPM Staff

In preparing this type of document a substantial length of time was needed for retrieval, recall, reflection, realignment, review, and revision. The drafting alone took two months and at least five (5) revisions; that was over and above five (5) years of continued observations and writing of journal insights over the progress of the LEPM process in the city since 2000.

Generosity and kindness in sharing of ideas, information, and skills brought vast opportunities for building up partnership, or collaborations at all levels; individual, association, barangay, and city. The display of goodwill was energized with hope for the best and supplication for the Divine Providence.

In a final summary, the total of the SCP-LEPM Process, with all the dynamics experienced in the project, promotes to its fullest meaning, the establishment of popular democratic processes and structures among governments at all levels.

The LEPM Process: The Project and Beyond

People might think this document must serve as the long due terminal paper of the CDO LEPM project. This thinking may be true, yet, one must understand this document under the GOFAR Project could be a signal for the beginning of a much broader continuation of the EPM process, and on a higher level; good governance.

Looking into the development of the EPM process in the city, the implementation of the GOFAR Project completed the basic cycle of the SCP process. However, it was important to realize that the project design of GOFAR manifest a unique sense. It was not a typical project intended mainly to download deliverable outputs but to open up opportunities for the local government units to develop themselves with their own local expertise in partnership with the DILG. This development could be considered as the first and biggest step towards genuine sustainable development.

It has been a normal procedure in the past for the EPM unit to conduct an intensive study to identify potential development directions, and establish a development platform where subsequent project concepts and proposals were footed. This a practiced learned from the EPM process. The study titled Correlation between Precipitation and Discharge Rate of Cagayan de Oro River was focused on one of the major surface freshwater resources of the city. The research was conducted in anticipation of the need to assess and address the environmental issues that embody the socio-economic problems among the hinter barangays of the city.

The study opened many opportunities related to the EPM process: it clarified the entwining connectivity of environmental issues of population, forestry, agriculture, and freshwater that downloads to the issues of urban settlement, industrial, costal and marine sectors identified during the LEPM city consultations in 1999; it made use of ordinary skills for the development of alternative GIS in generating quick maps using ordinary drawing feature of a popular word processing software; and highlights the potential role of the LEPM experiences, and the CEP in enabling the LGUs to become ENR-development-ready more particularly in the field of comprehensive fresh water resource management at the regional level.

In response to the study, the R&D submitted to the Committee on Agriculture and to the Chairman of the Committee on Environment a proposal for a joint endeavor titled: A Program for Comprehensive Urbanization of Cagayan de Oro City through Sustainable Development in Agriculture, Fisheries, Forestry, and Mobility (CUDSAFFM-CDO). The most important significance of this proposal is its potential for linking with the GOFAR Project Component 3 using the program capacity to serve as a platform for delivery of basic services, good governance, and socio-economic development of rural communities through the LEPM process. The proposed program has development thrusts consist of Advocacy (information, education, and communication (IEC) and community extension); Indigenous Resources Management (indigenous farming resources); Spiritual Reinforcement and Character Formation (positive character building), Good Governance (accessibility and proximity of barangay governance),

Sustainable Resource Management and Development (promote use of renewable energy, family health and nutrition, and home economics) Cooperative Capital Buildup and Productivity (emphasizes on individual, home, and community-based micro economics), Program Development (policy studies, review, formulation, and support) and Replication (emphasizes replication-compatible program development design).

On January 16, 2006, the LEPM people of Barangay Gusa initiated the formal organization of the Philippine Association of SCP/LEPM Specialists composed of EPM advocates directly involved in project implementation in the Barangay. The intent of said NGO vocational grouping is the institutionalization of SCP/LEPM skills. The role of the organization which was basically composed of SCP/LEPM adherents include; formal identification, validation, and recognition of individual skills and specific participation, systematic delineation of respective task and skills (for sharing of experiences), and promotion of the attainment of SCP/LEPM skills through institutional certification (or local professionalism).

Thus, the program would establish extensively respective SCP/EPM action profiles among LGUs throughout the country. The organization starting in Barangay Gusa was eyed and designed to be national in scope. The membership was classified according to various categories; level (city, municipality, barangay), skills (ISWM, community organizing, IEC, policy support and ordinance, public administration, and so on), location, etc. Likewise, all the graduates of GOFAR scholarship training shall be automatically qualified. Organizational Expansion shall be made through certified recognition of local chapters among LGUs. This direction is seen, as far as the process cycle is concerned to some of the CDO LEPM staff, to be the finishing touches for SCP-EPM Process in the city.

The stories behind the LEPM process in Cagayan de Oro City showed the complexity and the excitement in introducing a process-based development in a community. Recapitulating the experiences, running a process-based project was like running a political mission where all the staff must be intellectually prepared for all eventualities that emerge from time to time with the dynamics of development. Nevertheless, no matter what activity was undertaken through the LEPM process, it was always been in consciousness of the implementer the political beneficiaries of the project activities were the demo barangays, and the city government; and the final beneficiaries of all these developments, in general, are the citizens of Cagayan de Oro City.

In generating documents it was crucial to observe conventions; the title of the document, name of the author, the encoder (writer or scribe), and the date written. It was experienced in LEPM process documentation this information was necessary and must be used in file nomenclature to facilitate search and archival procedures because the dates of digital files are changed automatically upon update.

This document simply demonstrates the intricacy of process documentation. Somehow it was, basically at its best, based on recall and backtracking to construct the CDO LEPM Project history. One hard lesson gained from this documentation showed the importance maintaining a registry of complete name of participants, designation, and organization they represented during special activities. It also showed the importance of maintaining a milestone, and a journal of insights among staff that handles technical jobs. Certainly a report system must be established before the project inception.

Perhaps another matter to consider was that, what counted most was the deep sense of history. This document had become part of that reckoning – to give justice to all who have labored, the stakeholders, the partners, the members of the project staff, the UN agencies and most of all the people in the government. To some the circumstances that enveloped the EPM process development were purely coincidence, but to some project staff it was a part of the Divine Providence, an answer to our prayers.

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GLOSSARY

Component. It refers to a package or subsystem of activities laid down to do the work.

Demo projects. Refers to projects implemented to prototype certain sets of, actions, activities, or measures. There were two types of project referred to demo projects in this document; 1.) Demo city project which refers to the LEPM Project of the city of the National EPM Demo Cities Project, and; 2.) Catalytic demo projects established by the EPM stakeholders to address specific environmental issues.

Design. It refers to the dynamics of the interaction or the interrelationship of structural elements.

Framework. It refers to the structural elements and its arrangements (or placements).

Ground-level Partners (GLP). The LEPM stakeholders and project beneficiaries themselves who were actively involved in implementing the project activities.

Institutionalization. From a definition drawn-out from project experience, it is the process of establishing an official, widely recognized, and permanent work system for a regular interaction among the public and its counterparts, with its customary features and structures.

Key players or actors. These were the stakeholders, and institutional partners who were reactively in the mainstream of delivery of service, or process towards change.

LEPM Staff. The term refers collectively or separately to the members of the LEPM Project Unit or Project Support Team (PST) which act as the project management or secretariat unit. The team was a institutional support provided to various LEPM Working Groups. The PST is composed of the Project Manager, technical staff, and support staff. In context, it also refers to the collaborative action of either all, or only those concern personnel of the LEPM Support Team by virtue of function, technical position, or skills.

Partners. This refers to the groups involved in assisting the LEPM project by extending physical, technological, and manpower resources and actively perform as complementary co-managers of EPM process in the implementation

of activities. The identification of partners usually were undertaken during consultative meetings. They were selected as they were perceived to be important parts of the delivery system either input or output, of a catalytic project. Technically, when stakeholders become formal part of the action in mitigating the problem, they become partners.

Organogram. A chart showing schematic relationships and respective hierarchy of actions, and actors.

Politics. Refers to the art and science of public administration, governance, or the management of public business or affairs of the state.

Process. Refers simply to the collusion or combination of *reactions* that bring change (social, political, economic, depending on usage). The EPM process in the common understanding of the project participants, was the set of SCP components designed to bring positive change in local environmental management. In this document the SCP process refers similarly to the EPM process.

Stakeholders. The stakeholders are defined as: 1.) those who possesses relevant information, knowledge, or expertise concerning the environmental issues, 2.) those who control or influence relevant instruments or intervention and implementation, and; 3.) those whose interest are directly affected by, or whose activities affect, the particular environmental issues.

ABBREVIATIONS

AIM	Asia Institute of Management
ANGOC	Asian Non-Government Coalition
APO	Agricultural productivity Office
BAI	Bureau of Animal Industry
BKO	Buhing Kinaiyahan Organization
BPI	Bank of the Philippine Islands
CAD	Computer Aided Design
CART	Center for Alternative Rural Technology
CCU	Cagayan Capitol University
CDO	Cagayan de Oro
CDO-AU	Cagayan de Oro City-Asia Urbs
CDOEMSDP	Cagayan de Oro City Environmental Management and Sustainability Development Program
CEP	City Environmental Profile
CEPMSM	Center for EPM Studies in Mindanao
CBO	Community-Based Organization
CHO	City Health Office
CPDO	City Planning and Development Office
CPSO	City Public Services Office
CLENRO	City Local Environment and Natural Resources Office
CLUP	City Land Use Plan
COWD	City Water District
CTO	City Tourism Office
CUDSAFFM	Comprehensive Urbanization of Cagayan de Oro City Through Sustainable Development in Agriculture, Fisheries, Forestry, and Mobility
CVO	City Veterinary Office
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
DILG	Department of Interior and Local Government
DMPI	Del Monte Phils. Incorporated
EMIS	Environmental Management Information System
GIS	Geographic Information System
GLP	Ground-level Partners
GPS	Geographic Positioning System
HLURB	Housing and Land Use Regulatory Board
LDCU	Liceo de Cagayan University
LCP	League of Cities in the Philippines
LEPM	Local Environmental Planning and Management
NIA	National Irrigation Administration
NMPSC	Northern Mindanao Polytechnic State Colleges

PAGA	Philippine Allotment Gardeners Association
PAGASA	Philippine Atmospheric, Geophysical and Astronomic Survey Administration
PCUP	Presidential Commission On Urban Poor
PMCU	Project Management and Control Unit
PNP	Philippine National Police
PPA	Philippine Ports Authority
PPPUE	Public Private Partnership In Urban Environment
SCP	Sustainable Cities Programme
SRLSF	Safer River, Life Saver Foundation, Inc.
UNCHS	United Nations Commission on Human Settlements
UNDP	United Nations Development Programme
UNEP	United Nations Education Programme
XU	Xavier University

ANNEX 1

LEPM Key Activities

Key Indicators	Implementation Span	Time	Major Activity
Clarifying environmental issues to be addressed.	Starting at the beginning of	Phase 1	Project inception, Issue identification, integration,
Involving those whose interest is affected and cooperation is required.	Starting Project Agreement of	Phase 1	Advocacy, Identification of Stakeholders and Partners Briefing Orientation Seminars, and Networking
Setting priorities	Starting last quarter of	Phase 1	Issue prioritization
Negotiating issue-specific strategies	Starting 2 nd quarter of	Phase 2	
Coordinating overall environmental strategies	Starting 2 nd quarter of	Phase 2	Linkaging with DENR, CPDO, HLURB, and the rest of stakeholders for the CLUP
Agreeing on environmental Plans	Starting 3 rd quarter of	Phase 2	Issue prioritization, and City consultation
Initiating priority short and long-term projects and programmes	Starting first Quarter of	Phase 3	Seminar-workshops on project mechanics, consultations with technical working groups, one-one-one consultation

ANNEX 2

The Members of the Cagayan de Oro City LEPM Staff

Function	Functional Scope	Names
Project Coordination (PC)	City Administrator	City Councilor Alvin R. Calingin
Project Manager (PM)	CENRO Designate	Edwin I. Dael
Office Administration (OA)	Project Manager	
	Administrative support services	Andrew Z. Abas
Coordinator for Community Extension (CEC)	Social Initiation and Cultivation	Cres Nilles
	CEP/Statistics, Project Design, Coordinator for	
Coordinator for Research & Development (R&DC)	Research and Development, Policy Support, Methods and Improvement	Julius Bona
Coordinator for Urban Agriculture (UAC)	Agri Field Demonstration and Management,	Roscoe Masiba
		Cres Nilles (ISWMC1)
Coordinator for Solidwaste Management	Solidwaste Management	Rayna Lagman (ISWMC2), Gilda Giral (ISWMC3)
Coordinator for Training and Facilitation (TFC)	Training Seminars, and Activity Design	Jocelyn Salcedo (TFC)
Coordinator for Information, Education, Campaign (IECC)	Social marketing and Community-based EIC Coordination	Imma Rae Gatuslao
Coordinator for Geographic Information System (GISC)	EMIS/GIS Operations	Joyce Lago (GISC1) Donah Marie Achas (GIS Assistant)
Administrative Support	Office Administration and Records	Marites Casiño (ASOAR1) Gigi Gayrama (ASOAR2)
Administrative Support	Technical Support	Menchu del Rosario (AST1) Florani Java (AST2)
Administrative Support	Finance	Marites Lumamba
Administrative Support	Liaison	Marivic Gapuz

Administrative Support

Logistic Support

Edsel Jimenia

Vehicle Services

Vehicle Driver

Fred Daya

ANNEX 3

Chairmen of Ecosystem Sectors of LEPM Project, Cagayan de Oro City (1999)

Sector	Name	Organization
Air Quality	Rey Calixtro	City Abbatoir
Freshwater	Librado Peliño	Barangay 17
Forestry And Agriculture	Engr. Avelino Sario Jr.	Federation of Small Farmers Associations of CDO
Mines and Minerals	Guillermo Parrel	Kagawad, CDO City Council
Coastal and Marine	Sancho Bavierra	Federation of Fisherfolk Associations of CDO
Industrial Sector	Ray Abejo	Del Monte Phils. Inc.
Solidwaste	Eulogio Dosdos	CPDO

ANNEX 4

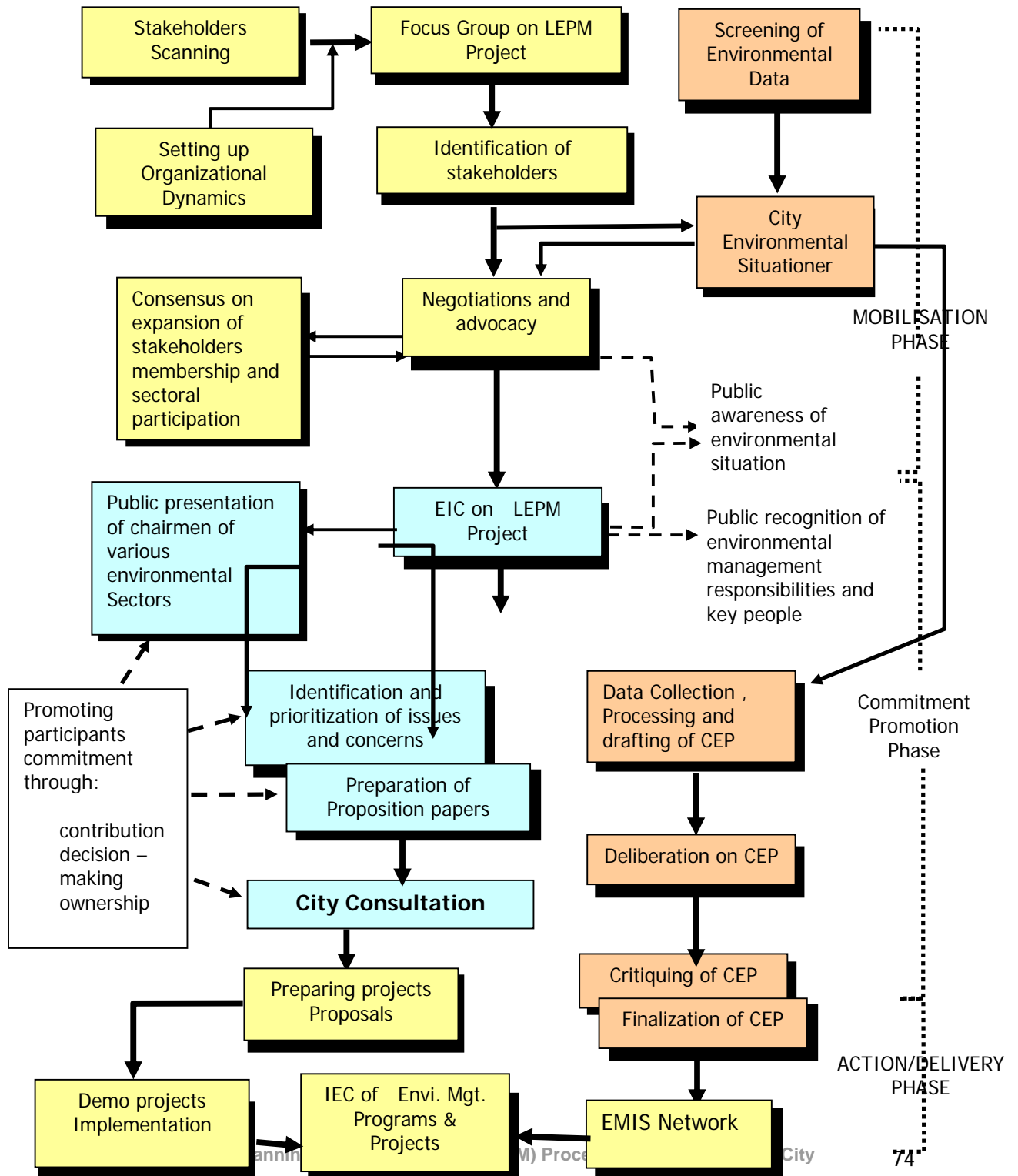
LOCAL EPM STAKEHOLDERS FINAL LIST OF ENVIRONMENTAL ISSUES & CONCERNS IN CAGAYAN DE ORO CITY (1999)

The need to establish city-wide hazardous waste management (CFSS, Chem) program.
Loss of good quality water and air.
Environmental protection as among the policies and priorities of industries.
Garbage management.
Public awareness on the monitoring of compliance of environmental policies (operating/ECC, etc.).
Inadequate enforcement of maritime laws for Coastal Protection conservation & Rehabilitation.
Lack of technical knowledge, equipments, staffing, operational budget for environmental management.
Lack of political agenda (less cooperation and coordination among LGU's & concern agencies.
Lack of uniformity of local ordinances, lack of lawyers to prosecute against polluters & illegal fishers.
Lack of public information drive for the protection & conservation of marine life
Poor socio political & Environmental direction that resulted to unequal distribution of economic opportunities & particularly prevalent poverty among fisherfolks.
Integral migration, growth centered, development.
Improper disposal of domestic/commercial waste & ineffective anti-pollution device of industries.
Degradation of coastal marine habitat and depletion of marine resources; Coral Reefs, Sea Grass, Mangroves.
Hazardous placements of building and other structures along seashores of Cagayan de Oro City.
Improper garbage management regarding segregation collection & disposal.
Need for education/information and value formation.
Insufficient funding for environmentally related activities.
Limited buy and sell information on recyclable materials.
Need for a standard sanitary landfill.
Need to update laws/ordinances and involvement of the brgy. Officials in the implementation.
Degradation of water & air quality & the destruction of surface & ground water quality.
Limited air & water quality monitoring & equipment & facilities such as roads, bridges & others.
Low number of construction of gutter (drainage) within barangay roads. Lack of

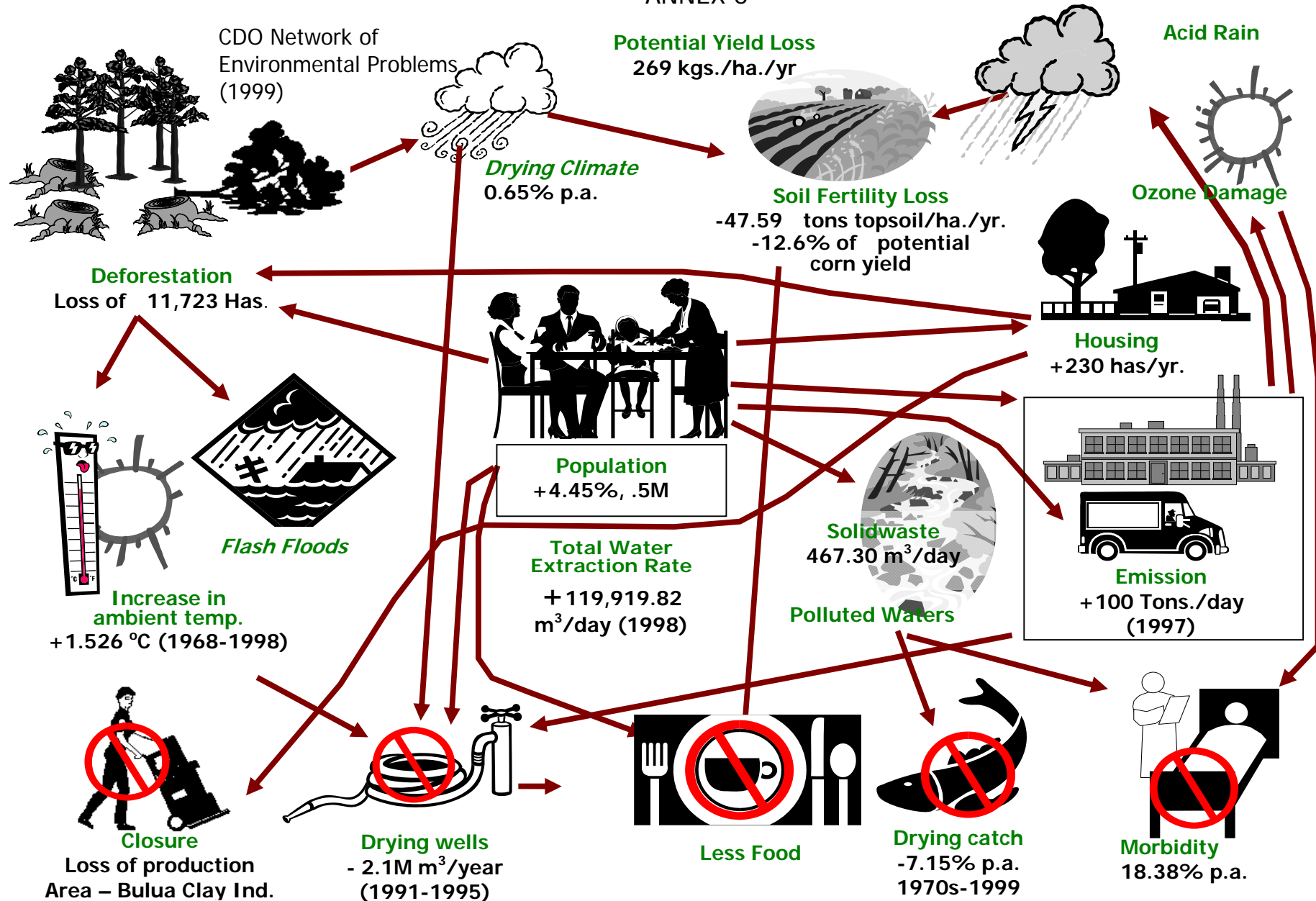
infrastructure facilities such as roads, bridges & others.
 Inefficient collection of garbage (solid & liquid waste) in every subdivision/barangay.
 No established liquid waste disposal centers.
 Poor implementation of existing ordinance regarding traffic violation & poorly planned and manage transport system.
 Foul odor & dirty liquid waste from fish landing in Agora market.
 Lack of education & information campaign related to environmental activities.
 Lack of representation from government for financial assistance to low income drivers & operators.
 Contamination of ground water.
 Depletion of surface & ground water quality.
 Pollution from industrial and manufacturing establishments.
 Pollution from domestic liquid waste generated by households and commercial establishments.
 Indiscriminate dumping of garbage.
 Accelerated siltation, erosion & pollution from mining activities.
 Lack of mineral land evaluation.
 Lack of government support in terms of research and development.
 The lack of consistent policy on the use of heavy equipment on quarrying which should be applied to both public and private agencies whether sand and gravel operation on river, or mountain quarries.
 The lack of information on regulatory law/rules to be applied to private or public agencies in the sand and gravel operations of river and mountain quarries, and in the issuance of permits for the extraction of soil and filling materials like earth.
 Government agencies extract S & G without gratuitous special permit.
 The government tolerance of illegal quarry operators.
 Illegal cutting of timber within Iponan watershed.
 Inadequate education on forest conservation.
 Absence of ecological balance in reforested areas.
 Weak implementation of regulation, lack of manpower forest protection activities, political intervention, issuance of replevin, illegal occupants within the timberlands and non-development of ISF areas by occupants.
 Massive quarrying in Iponan River.
 Extractive of phyllite-schist at the slope of Malasag area.
 Expired pasture lease agreement.
 Improper agricultural land use which include conversion of agriculture to residential & vise versa.
 Massive and improper use of inorganic fertilizer and pesticides.
 Lack of government and stakeholders participation in marketing support for sustainable agriculture; lack of food processing activities.
 Lack of farm to market roads and lack of electrification facilities at remote rural barangays.
 Lack of capital among farmers.
 Inadequate monitoring, evaluation & information dissemination which resulted in inadequate and indigenous farming approach and weak farmer association & coop.

ANNEX 5

Major Milestones in CDO LEPM Project Process

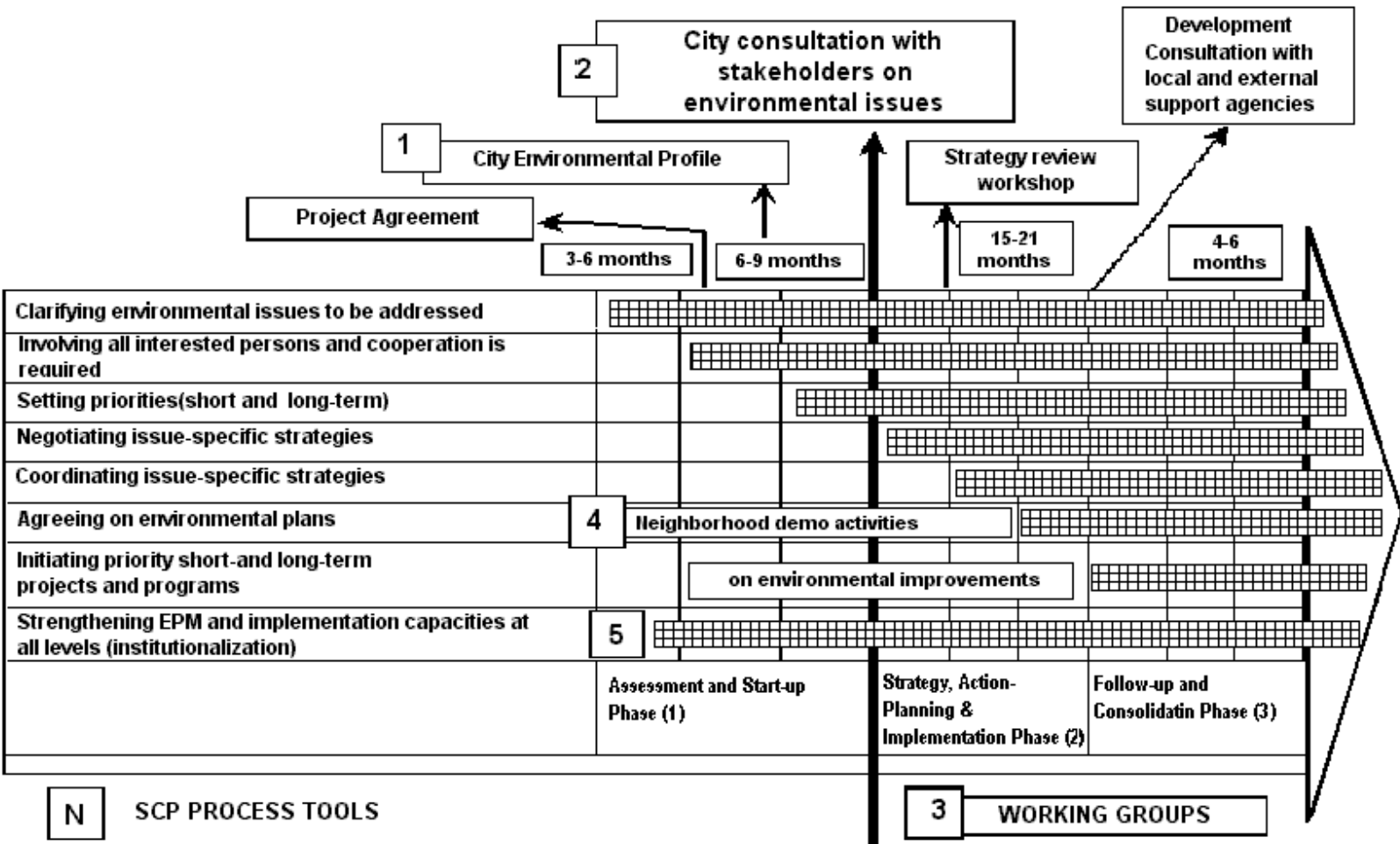


ANNEX 6



ANNEX 7

The SCP Demonstration Process



ANNEX 8

Ground-Level Partners, Resource Persons, and Advisors

Eduardo Vicilia	Representative (as Association President)	Garbage Pickers Association
Alberta Hernandez	Representative (as Association President)	CDO Homeowners Association
Sancho Bavierra	Representative	CFARMC-Bonbon
Mario Sumalinog	Representative	CEPALCO
Diosdado Durban	Representative	GUSEAFA
Benito Tan	Consultant Writer	
Rachel Beja	Representative	COWD
Benie Malinda	Representative (as President)	WARBOF
Gil Constantino	Representative	DECS
Eric I. Salcedo	Chairman of Barangay Council	Barangay Gusa LGU
Marlo Tabak	Chairman of Committee on Environment	Barangay Gusa LGU
Antonietta Go, Teodora Carasco, Paulo Candongo, Benita Constantino	Community Organizing	Barangay Gusa LGU
Gina Jabol	Barangay Information Officer	Barangay Gusa LGU
Zenaida Gogo, Atty. Araña	Chairman of Barangay Council	Barangay Bugo LGU
Raul Aleria	Chairman of Committee on Environment	Barangay Bugo LGU
Kag. Avelino Sario Jr., Kag. Alejandro Linug	Kagawad, Barangay Council	Barangay Bugo LGU
Roy Dino Tenaja	President, PAGA	Villa Trinitas
Geraldino Sabala, Fernando Remegio, Emilio Barbosa	Ground-Level Partner, PAGA	Villa Trinitas
Kawagad Paju	President, Lagubo	Barangay Lapanan
Shirley Almazan	Representative (as head of the agency)	PAGASA

Kathy Fonollera, Mike Ignacio	Representative	Cagayan de Oro de Oro-Iligan Corridor Special Development Project – Project Management Office
Victorino A. Porpio	Representative (as head of the agency)	Nestle Phils.
Edmundo Salcedo	Representative (as PCO)	Pepsi Cola Bottlers Phils.
Heartie Abellanosa	Representative (as Manager of Save the Mother Earth Foundation)	Bank of the Philippine Islands
Dr. Modesto Mabaylan	Representative (Director of Safer River Life Saver Foundation, Inc.)	Liceo de Cagayan University
Jade Managbanag, Chona Palomares	Representative	Liceo de Cagayan University
Dr. Romeo Del Rosario	Representative (Chairman of the Chemistry Department)	NMPSC
Dr. Dulce Dawang	Representative (Biology Department)	Xavier University
Dr. Robert S. Holmer	Representative (Director of PUVEP)	Xavier University
Dr. Anelda Kiamco,	Representative (Chairman of the Chemistry Department)	Cagayan Capitol Colleges (now Cagayan Capitol University)
Dr. Alex Gadrinab	Representative (for CEP)	DENR
Paul Salise	Resource Persons	Mines and Geosciences Bureau-10, and DENR-10.
Edelmiro Ochoco,		
Fidel Gamos Jr. ,		
Gemma Ravanera,		
Engr. Cyrus Tuazon,		
Nicomedes Cabahug,		
Engr. Edecio Clarin,		
Engr Wilfredo		
Mahidlawon, Osin		
Sinsuat Jr. and Liza		
Socorro Manzano. And		
Hazel Gayloa, Florencio		
Dominguez Jr.		
Mabel Gemma A. Ravanera	Resource Persons	Forestry
Wilma Rugay, Atty Noel Guibona	Project Coordinator (City Administrator)	City Administrator's Office

Reyna Pioquinto	Representative	APO (Fishery Division)
Dr. Eldigardo Dagondon	Head of Office	CVO
Dr. Leo R. Generalao	Representative	CHO
Adelfa Takastakas	Representative	CHO
Alan Abucejo	Head GIS Group	CPDO
Isidro Borja, Estrella	Representative	CPDO
Sagaral, Mabel Marte		
Sandra Tadeo	IEC	CIO
Eulogio Dosdos, Josette Segne	Representative	CPSO
Cynthia Rosales	Representative (Head of Office)	PCUP
	Manager	ORODOC
Bong Teves	Manager	Metro Manila Linis-Ganda
		LCP-ECO
Romy Morelos	Representative	PMCU
Glenn Bonquin	Software	PMCU
Merceditha Medina	Office Staff	PMCU
Emy Cordova, Gilda Manombaga	Finance Officer	PMCU
Amy Dasig, Cecil Cardinoza	Training Consultant	PMCU
Reuel Aguila	Resource Person Video Production	PMCU
Arlene de Vera	IEC Specialist	PMCU
Godofredo Amper	Consultant for CDO	PMCU
Alan Ponce	Consultant for Process Documentation	PMCU
Dr. Sishiro Tomioka	Consultant for SWM	JICA
Atty. Gil Cruz	Executive Director	LCP
Rey Singh	Director for SPCM	Asia Institute of Management (AIM)
Connie Crisostomo, Nestor Venturillo	LEPM Program Director	DENR-PMCU
Dr. Noel D. Duhaylungsod	National Adviser for LEPM Project	UNDP
Gerald Putotan	Project Dev. Staff	DILG
Austero Panadero	Assistant Secretary	DILG
Lowie Rosales	Resident Manager - Philippines	UNDP
Chris Radford	Senior Adviser	UNCHS

ANNEX 9

Participants Of The CEP Technical Working Group

Ms. Angelilah Talle	Bureau of Fisheries & Aquatic Resources Office
Ms. Estela Rubin	City Engineers Office
Ms. Vicenia B. Vivares	City Engineering Office
Mr. Allyson C. Sacabin	City Health Office, Cagayan de Oro City
Dr. Hildegardo M. Dagondon	City Veterinary Office
Mr. Josue M. Ledres	City Veterinary Office
Mr. Jun Velez	City Veterinary Office
Engr. Rachel Beja	Cagayan de Oro City Water District
Engr. Erlinda Noval	City Planning & Devt. Office,
Engr. Isidro Borja	City Planning & Devt. Office
Mr. Eulogio Y. Dosdos	City Public Services Office
Ms. Jossette B. Segne	City Public Services Office, Cagayan de Oro City
Ms. Zaida Z. Tan Neri	City Public Services Office Cagayan de Oro City
Mr. Rosalio M. Lorono	Dept. of Agriculture-10
Ms. Jocelyn A. Gementiza	Dept. of Agriculture-10
Mr. Pol G. Sanchez, Jr.	Dept. of Agrarian Reform-10
Dr. Alex Gadrinab	DENR-10
Gaudencio L. Paulma Jr.	Dept. of Env't. & Natural Resources Office
Ms. Susan T. Pakino	Dept. of Trade & Industry Mis. Oriental
Engr. Eldemer Gochuco	Environmental Management Bureau-DENR
Engr. Florencio Dominguez, Jr.	Environmental Management Bureau-DENR
Engr. Wendell Talampas	Environmental Management Bureau-DENR
Engr. Juanito A. Manzano	Mines & Geosciences Bureau-DENR
Engr. Paul C. Salise	Mines & Geosciences Bureau-DENR
Engr. Wilfredo A. Mahidlawon	Mines & Geosciences Bureau-DENR
Ms. Hazel B. Tuazon	Mines & Geosciences Bureau-DENR
Mr. Bart M. Fuentes	City Agriculture Office
Ms. Shirley V. Almazan	PAGASA

ANNEX 10

Participants of LEPM Technical Working Group

Adelfa Tacastacas	CHO	S.I. II
Alberta Hernandez	FCDHOA A-I	Treasurer
Anne P. Pajo	CPDO	Economist III
Aurora Bagting	Garbage Pickers	Member
Bart M. Fuentes	APO	MAO
Benito C. Tan	GEA I	Officer
Bernardita Agustin	Garbage Pickers	Adviser
Crecila J. Nilles	L-EPM	Coordinator - Community Dev. and Extension
Cynthia B. Rosales	PCUP	ARD
Edmundo T. Salcedo	Pepsi-Cola Products Phils. Inc.	QA & Process Mgr.
Eduardo Vicilio	Garbage Pickers	Member
Edwin I. DaeL	L-EPM	Proj. Mgr.
Elisa Gican	Garbage Pickers	Member
Avelino Sario, Sr.	CPAC/BNGO Bry. Council	Kagawad
Erlinda A. Noval	CPDO	PO III
Ethel Dy Edrote	CPDO	STAT III
Eulogio Y. Dosdos	CPSO	Division Chief
Florencio W. Mandaya	CHO	CHO S.I. II
Gigi G. Gayrama	L-EPM	Support Staff
Helbert R. Cual	NESTLE	Env. Engr.
Jocelyn A. Gementiza	DA-RFUX	Agri II
Jocelyn M. Salcedo	L-EPM	Training Officer
Joyce Lago	L-EPM	ITO I – EGIS
Julius N. Bona	L-EPM	Coordinator – CEP/Proj. Design
Leo R. Generalao	City Hospital	CHO
Mabel V. Marte	CPDO	PDO III
Patriotismo L. Navarro	MGB 10	Engineer III
Paul Salise	MGB 10	Chief Mining and Env. and Safety Div.

Pedro E. Quidlat	Garbage Pickers	Organization Pres.
Rey Calixtro	Chairman, Air Quality Sector	Manager, City Abbatoir
Reyna G Pioquinto	APO	Agri I
Rolando Quidlat	Garbage Pickers	Member
Roscoe Masiba	L-EPM	Technical Staff for Agriculture
Shirley V. Almazan	PAGASA	Chief Met. Officer
Susan A. Bautista	FCDHOA II	Secretary
Vincent O. Teromo	CHO	CHO II
William D. Adecer	CPSO	Utility Foreman

ANNEX 11

Cagayan de Oro City Officials (1999)

<i>City Mayor</i>	Vicente Y. Emano
<i>Vice Mayor</i>	John L. Elizaga
<i>City Councilors</i>	Alfonso C. Goking Alvin R. Calingin Annie Y. Daba Caesar Ian E. Acenas Celestino B. Ocio III Edgar S. Cabanlas Jose Benjamin A. Benaldo Juan Y. Sia Maryanne C. Enteria Michele J. Tagarda Noel S. Beja President D. Elipe Ramon G. Tabor Roy Hilario P. Raagas