



A Proposed DENR Road Map for Replicating and Scaling Up of Governance-Oriented Integrated Ecosystems Management

Prepared by:

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DENR-World Bank National Program Support for
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DENR Foreign-Assisted and Special Projects (DENR/FASPO)
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List of Abbreviations

ADSDPP	Ancestral Domain Sustainable Development And Protection Plan
B+WISER	Biodiversity and Watersheds Improved for Sustainable Economy and Resiliency
CADT	Certificate Of Ancestral Domain Title
CBFMA	Community-Based Forest Management Agreement
CDP	Comprehensive Development Plan
CENRO	community environment and natural resources office/officers
CLUP	Comprehensive Land Use Plan
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
DENR FASPO	DENR Foreign-Assisted and Special Projects Office
DILG	Department of Interior and Local Government
DOF MDFO	Department of Finance's Municipal Development Fund Office
DOT	Department of Tourism
DRR	disaster risk reduction
ENR	environment and natural resources
FLUP	Forest Land Use Plan
FMP	Forest Management Project
GEF	Global Environment Facility
ICMP	Integrated Coastal Management Plans
IEM	integrated ecosystems management
INREM	Integrated Natural Resources and Environmental Management
IRA	Internal Revenue Allotment
LGU	local government unit
LRA	Land Registration Authority
LSP	local service providers
M&E	monitoring and evaluation
NCI	National Convergence Initiatives
NEDA	National Economic Development Authority
NGO	non-government organization
NN	non-negotiables
NPS-ENRMP	National Program Support for Environment and Natural Resources Management Program
PAMB	protected area management board
PDP	provincial development plan
PENRO	provincial environment and natural resources office/officers
RAA	responsibilities, accountabilities, and authority
RMU	resource management unit
TWG	technical working group

Executive Summary

An integrated ecosystems management (IEM) strategy enables local stakeholders to individually and collectively carry out governance-oriented programs of actions in support of common vision, mission, and objectives. It is an important and much-needed innovation for environment and natural resources management in the Philippines. The Environment and Natural Resources Management Project Global Environmental Facility (ENRMP/GEF) Project piloted the IEM steps and processes in four sites, resulting in agreements that would facilitate integration of different ENR sub-sectors and local government interventions in a watershed-ecosystem. The pilots have generated valuable lessons and guidance for replicating and scaling up the different IEM steps and processes.

To further pursue and improve the IEM strategy in the country's watershed-ecosystems, one IEM replication site per region is recommended. These replications are needed to deepen IEM effectiveness and efficiency before expansion or large scale implementation. These sites can also be the future learning sites for the IEM approach. The Department of Environment and Natural Resources (DENR) may align current and proposed regular and foreign-assisted projects such as the National Greening Program, Integrated Natural Resources and Environmental Management (INREM), Forest Management project (FMP), Biodiversity and Watersheds Improved for Sustainable Economy and Resiliency (B+WISER) and others in support of IEM pilots in the regions. DENR in collaboration with local government units (LGUs) and other local partners may adopt the ENRMP/GEF project guidelines for further refinement, especially on their effectiveness, feasibility, simplicity, efficiency, replicability, and attractiveness.

The initial IEM replication and scaling up efforts may start small while improvement in capacities, policies, support systems, budgetary process, and other preparatory activities are underway. However, DENR has to ensure that the following needs are met to sustain initial momentum and trigger self-propelling IEM expansion activities in the long term.

1. Designated units at the central, regional, and provincial DENR offices to plan and implement the IEM steps or process;
2. Training of DENR and LGU staff for replication or scaling up. Replications may need the support of national and local experts.
3. Support systems for replication or scaling up such as policies, facilities, equipment, access to specialists and external expert advice, and training.
4. Linkages with local and national resource institutions that could be engaged to perform specific IEM tasks and activities such as mapping and geohazard assessments.
5. Protocols for setting up governance bodies to periodically assess progress of replication or scaling up based on commonly agreed upon IEM outcomes and outputs.
6. Commitments for funding support for the replication or scaling up by LGUs and DENR.

This report recommends that DENR adopt the supply-driven replication and scaling up strategy. DENR, in collaboration with other concerned agencies and LGUs, has to provide the necessary policy framework, technical support, capacity building, and guidance in IEM planning and implementation. The State has the largest stake with respect to IEM replication and scaling up. It has the biggest investments on ENR-dependent facilities and public enterprises that support irrigation, energy generation, domestic water supply, ecotourism, and coastal and urban livelihoods. Moreover, the country needs to ensure ecological stability with effective conservation of biodiversity and critical habitats, as well as mitigate the increasing risks and damages from climate change-related natural and man-made calamities.

1.0 Introduction

The Philippines Development Plan for 2011-2016 (PDP 2011) underlines the integrated ecosystem management (IEM) as a major strategy for the conservation, protection, regulation, and development of the environment and natural resources sector in support of broad-based and inclusive economic growth. This national document recognizes that IEM can significantly contribute towards the achievement of the PDP 2011-2016's ENR goals and objectives especially in priority watersheds, highly diverse and economically significant areas. The sustainability of agricultural production, energy development, ecotourism, coastal zone and fisheries development, and programs on health and sanitation and climate change mitigation and adaptation measures hinges on IEM.

The Department of Environment and Natural Resources (DENR) is the main player in translating the IEM strategies into operational policies and actions down to the community level. IEM in priority watershed-dominated landscapes and highly diverse areas generates a set of configuration for aligning investments to improve comparative advantage in agriculture, renewable energy, ecotourism, and value chains of competitive goods and services. The IEM framework with prescriptive strategies highlights needs for improving governance and institutional capacities and for responding to the challenges of inclusive economic growth. Investments in IEM areas especially in the 140 priority watersheds (out of 267 critical watersheds needing urgent rehabilitation) are needed to sustain and secure water supply for national and communal irrigation systems, local water districts, hydropower generation, and ecotourism. Moreover, efforts must also address biodiversity conservation, reduced net carbon emissions from forests and land use conversions, sustainable forest management, and climate change mitigation and adaptation including reduction of risks from natural disasters. The IEM framework serves as the unifying point of national and local stakeholders, public and private sectors, civil society and communities for individual and collective actions towards commonly-defined goals. The framework's prescriptions are recommendations that are useful for the DENR field units, LGUs, and land and resource management units in developing their short, medium, and long-term development and investment plans.

The DENR and the World Bank, through the National Program Support/Environment and Natural Resources Management Project/Global Environmental Facility (NPS/ENRMP/GEF) project, initiated and supported the piloting of the IEM strategy in four sites for almost five years. The pilots have generated lessons, approaches, and institutional arrangements to address key ENR issues. At this juncture, however, and with the completion of project funding, the question that has to be asked is: "Will the IEM pilots be sustained? Replicated by other initiatives? Or scaled up by DENR and the local government units?"

This report focuses on how to sustain IEM implementation in the four ENRMP-supported sites, replicate best practices in existing and new initiatives based on lessons learned, and scale up or expand IEM-consistent approaches. It provides a brief assessment of the IEM processes as they are implemented in the pilot sites as well as a summary of lessons from the pilots while injecting insights from previous projects and trends of ongoing ENR and/or multi-sectoral development programs. As a context for IEM replication and scaling up, several concepts on replication and scaling up are also discussed.

The report identifies several enabling gaps that will have to be addressed in order to move IEM towards replication and scaling up. The report ends with specific recommendations on how DENR can move forward with the suggested road map for IEM replication and scaling up with existing and future initiatives.

2.0 IEM as a Strategic ENRM Innovation

IEM has resulted in systematic innovation assessments of previous lessons and effectiveness of sectoral interventions versus integrated approach with the joint efforts of national and local governments (LGUs). In the past, several analyses have shown that IEM is fit for sustaining and increasing the value and satisfaction obtained from ecosystems goods and services by on- and off-site consumers especially in watersheds where the connectedness of biophysical landscapes is visually evident. IEM has been introduced at a time of widespread concern on issues like increasing natural disasters from the impacts of climate change, increasing degradation and deforestation, loss of biodiversity, weak governance, and increasing poverty in highly vulnerable but biologically diverse ecosystems. Thus, under the World Bank's National Program Support/Environment and Natural Resources Management Project (ENRMP),¹ IEM as an intervention was designed to:

“assist the Department of Environment and Natural Resources improve efficiency and effectiveness in its service delivery. More specifically, the project would aim to strengthen the allocative efficiency of DENR's limited budget resources through better prioritization and partnership arrangements, facilitating scaling-up and better linking of plans and budgets;

“... at the watershed level, .. support a shift away from sub-sectoral interventions (forestry, protected areas, water etc.), towards an integration of ENR functions, in partnership with LGUs and communities;

“...enhance ecosystem services for global and local benefits... by applying an integrated ecosystem management (IEM) approach in priority watershed areas and selected sites of global significance.

The IEM strategy has piloted a socio-technical-institutional innovation with the aim of combining existing national and local resources to promote the productive and sustainable configuration of watersheds in providing ecosystems goods and services. In the four pilot sites, DENR-LGU collaborative efforts in planning and management were carried out at the ecosystem and LGU levels to increase the “wealth-producing potential of already existing resources”² such as the existing natural resources in a watershed, a protected area, or highly diverse habitats. The complementary efforts of DENR and the concerned LGUs are expected to result in synergy, minimize fragmented initiatives and wasteful overlaps of development activities, and improve overall management down to the land and resource management units.

At the pilot sites, 14 IEM steps and processes were carried out as on-site activities that tried to address various areas of concern, such as the following:

- Weakness, gaps, and development problems during the project design stage,
- Effectiveness of development interventions in achieving certain outputs and targets,
- Introduction of specific technical and socio-institutional innovations, and
- Results of development input variables such as expertise, inputs, and incentives that were introduced, directed, and observed.

Thus, in translating the IEM innovation in four sites, several phases for incorporating the key steps and processes were partly designed and carried out. Most of the phases, steps, and processes are part of the regular functions of both DENR and the LGUs. However, ENRMP/GEF project support made it possible to tap Department of Finance's Municipal Development Fund Office (DOF MDFO)

1 World Bank. 2007. Project Appraisal Document on a Proposed Loan in the Amount of US\$50 million and a Proposed grant from the Global Environment Facility Trust Fund in the Amount of US\$7 million to the Republic of the Philippines for a National Program Support to Environment and Natural Resources Management Project, East Asia, World Bank.

2 Drucker P. 1985. Innovation and Entrepreneurship. Harper Business. Page 31.

to fund sub-projects of LGUs that have political jurisdictions in the pilot sites. These sub-projects were designed to help the LGUs implement rehabilitation efforts, support livelihoods and enterprises of marginalized communities, increase effectiveness of enforcement, and capacitate local staff. By providing support and engaging local experts for coordination, facilitation, analyses and capacity building, the project has encouraged DENR and the concerned LGUs to prepare IEM frameworks as basis for investments in conservation, forest protection and rehabilitation, disaster risk reduction, poverty reduction, and alignment of land and resource uses across the watershed landscapes.

Moreover, the innovation was translated into an IEM framework, which was adopted as a guide for DENR and LGU investments and as basis for monitoring and evaluation of outcomes and outputs. The IEM framework has the following major components:

- Assessment of assets, issues, threats, constraints, and opportunities in the IEM sites;
- Common direction: vision, mission, and objectives of DENR, LGUs, and other local stakeholders in each site;
- Site-specific local environmental governance framework that defines:
 - ♦ What and where are the **non-negotiables**³ (NNs) and who are responsible, accountable, and authorized (RAA) to ensure that no compromises are made with respect to their management and regulation.⁴ The NNs are designated land and resource uses whose management and regulation cannot be compromised to ensure sustainability of the ecosystem;
 - ♦ **Responsibilities, accountabilities, and authority** (RAA) of DENR and LGUs in decision making as they plan and implement individual and collective IEM-consistent activities;
 - ♦ **Institutional arrangements** for collaborative management especially for oversight, implementation, monitoring and evaluation (M&E), and financing;
- Strategy for aligning land uses and directing investments in support of the management and regulation of the NNs, enhancement of comparative advantage, and higher value chains of competitive goods and services. Investments on the NNs and comparative advantage will intentionally create wealth and support higher value chains for the competitive goods and services. Investments on NNs and comparative advantage are incorporated in the national and local plans; reflected in the LGUs' forest land use plans (FLUP), integrated coastal management plans (ICM), and comprehensive land use plans (CLUP); and translated in the provincial development plans (PDP) and comprehensive development plans (CDP).
- Mechanisms on how DENR, the IEM oversight body, and each LGU will review, assess, monitor and deal with the unintended results of all types of investments and uses. These are generically termed as "externalities" in integrated watershed-ecosystem management.
- Monitoring and evaluation (M&E) systems that lay down expected outcomes and outputs of DENR and each LGU; and
- Financing and use of funds for implementation and collaborative management (e.g., General Appropriations Act, Internal Revenue Allotment (IRA)/Non-IRA, alternative sources).

The IEM framework has been designed as a set of prescriptions to be the rallying point for individual and collective programs and actions, M&E, financing, and even enforcement of various ENR laws that are relevant in the watershed-ecosystem. The official approval and adoption of the framework is the advocacy agenda of the technical working groups (TWGs) formed at each site. Since the IEM

3 The term "non-negotiables" has also been called "no compromise zones". Other terms may be used for as long as the substance and meaning of the concept or idea does not dissipate or be weakened.

4 More detailed discussions on "non-negotiables" and how they are determined in a watershed are in the ENRMP/GEF Project IEM Specialist's First Term Progress Report. This is available upon request at FASPO, DENR, Quezon City.

governance/oversight body at the ecosystem level—a council or expanded protected area management board—and each LGU through its Sangguniang Bayan (city/municipal council) adopt the framework, the incorporation of NNs in the FLUPs/ICMs/CLUPs is part of the overall IEM implementation. This allows each LGU and DENR to devise individual programs to ensure that the activities of the landowners and each resource management unit (RMU) are consistent with the framework.

The framework may also be used to strategically invest on infrastructure and support systems to enhance the comparative advantage of the watershed-ecosystem and incentivize the private sector to improve the value chains of the site's competitive goods and services. During the pilot implementation, however, most IEM processes after the framework adoption have just started and it may take more time before their effectiveness can be fully assessed and determined.

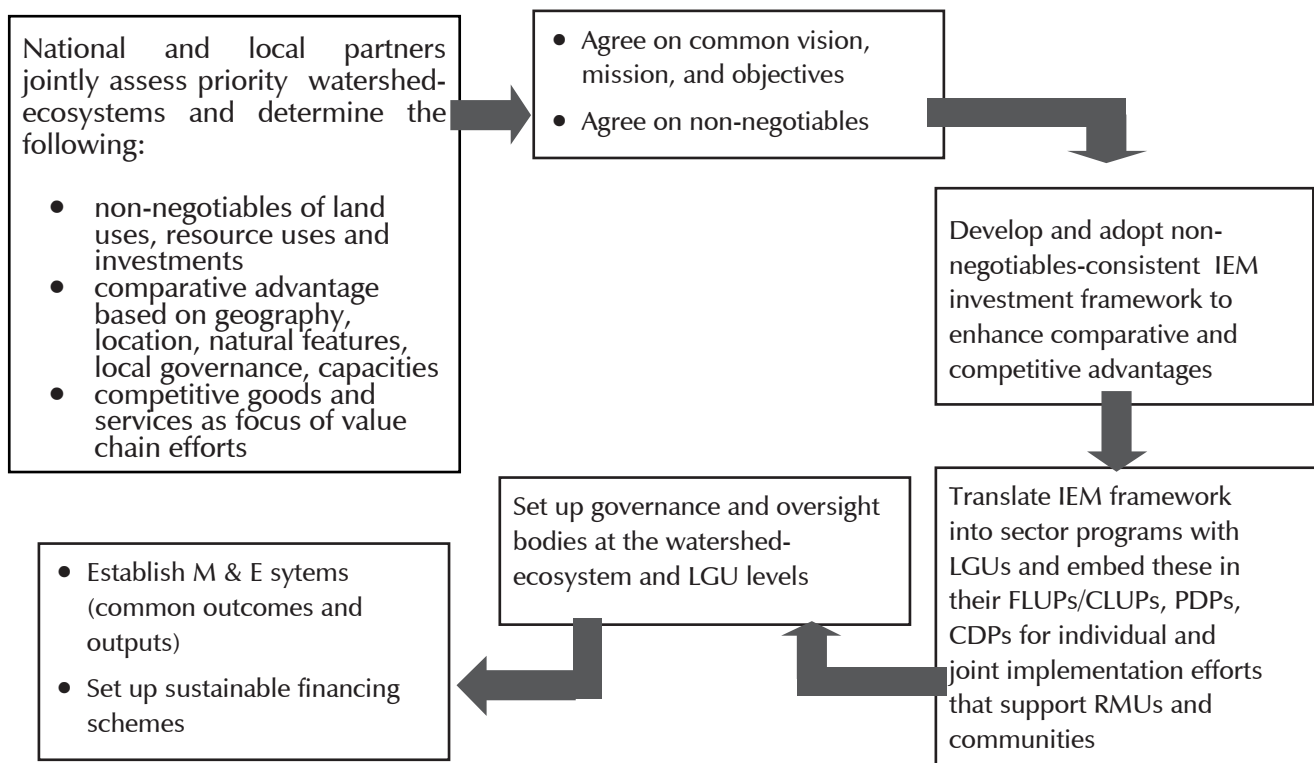


Figure 1. Key Processes in Formulating the IEM Common Framework and Implementation

3.0 IEM Innovation in the ENRMP/GEF Pilots

As previously mentioned, the IEM piloting involves at least 14 steps and processes and categorized into five different phases.⁵ The assessment of these steps and processes highlights gaps and weaknesses, provides context for discussing lessons learned, and helps determine effectiveness and efficiency of each step and process.

⁵ More detailed discussions on these 14 steps and processes are in the ENRMP/GEF Project IEM Specialist's Inception Report, which may be made available upon request with FASPO, DENR, Quezon City.

3.1 Assessment of IEM Steps and Processes

At the beginning of pilot implementation, the 14 IEM steps and processes were not intentionally designed as such. These were only part of work or activity plans. These steps and processes emerged over time as the project planned and implemented the IEM innovation on a more systematic, step by step process, adopted a “learning by doing” approach, and conducted periodic reflections among DENR field staff, LGU counterparts, and the DENR/FASPO technical assistance and staff support team. Implementation has almost mimicked a learning process approach with the intention of refining the steps and processes as needs for improvements were identified, observed, discussed, and agreed upon for adoption. In the end, the details of each step and process have been gradually modified or adjusted to fit the requirements of collaborative efforts in IEM planning and implementation.

The highlights of the assessment of the IEM steps and processes are the following:

preparatory and planning activities

Steps and processes in the preparatory and planning activities (Phases 1 and 2 as shown in Table 1) were completed in all the four pilot sites. Generally, steps 1-7 were effective in achieving the objectives of IEM of these phases: developing, adopting, establishing or strengthening governance bodies at the ecosystem and LGU levels, and committing funds to trigger the implementation phase. These steps have been used in the IEM replication in Quinali Tres A, Albay and in Oriental Mindoro (Pola and Bongabong watersheds). Some gaps and weaknesses in the steps and processes under Phases 1 and 2 are the following:

- ♦ Need for setting up an institutionalized mechanism at the regional level (led by DENR in close collaboration with concerned provinces and city/municipal LGUs) to systematically characterize the major watersheds based on agreed upon criteria; prioritize these watersheds with the LGUs and other concerned national agencies such as the departments of agriculture, agrarian reform, trade and industry, and tourism; and develop strategic regional plans as basis for preparing and adopting IEM framework for each prioritized and programmed watershed. The concerned National Economic and Development Authority Regional Council may officially endorse the IEM framework-based investments for increased allocation from the national budget or external funding. The concerned DENR region and each concerned province with support from DENR field units and field offices of other national agencies may be the repository of all key thematic, derived, and composite maps in all forms—digital and hard copies—for easy access, updating, management, distribution, and use.
- ♦ Participation of other ENR sub-sectors has been relatively weak in the preparatory and planning phases despite the fact that in the pilot sites, almost all the DENR technical support services in the region have to be involved, especially in ridge to reef watershed landscapes. For instance, in two of the four sites (Kanan-Agos River Watershed and Ligawasan Wetlands Biodiversity Reserve), the DENR Protected Areas, Wildlife and Coastal Zone Management Service has taken the lead in the IEM planning and implementation. In Bago River and Libmanan-Pulantuna Watersheds, the Forest Management Service and the Ecosystems Research and Development Service, respectively, have led the IEM pilot implementation. The other ENR sub-sectors, especially the Environment and Management Service and the Mining and Geosciences Service, were not actively involved. In all cases, the concerned community and natural resources offices (CENROs) stayed in the sidelines as pilot activities were managed under the provincial environment and natural resources offices (PENRO) or DENR regional offices.
- ♦ Need for an adequate institutionalized training program for DENR, LGU, and NGO staff and local service providers for governance-oriented IEM that incorporates on-site support and coaching during the preparatory and planning phases combined with mentoring during the implementation phases. The ENRMP/GEF project has generated a lot of training-related materials, presentations, reports, and other relevant documents that could serve as the starting point for developing an in-house or outsourced training program on IEM. The

Table 1. IEM Phases and Corresponding Responsibilities, Accountabilities, and Authorities

IEM Phases	Steps and Processes	Who is Responsible, Accountable, and has Authority?
1. Preparatory activities	1, 2	DENR Region or PENRO, province or cluster of municipal/city governments
2. Planning	3, 4, 5, 6, 7	DENR Region or PENRO, local governments
3. Implementation	8, 9, 10, 11	DENR, province, municipal/city governments
4. Monitoring and evaluation	12	DENR, local governments
5. Financing	13, 14	DENR, province, municipal/city governments

priority 140 watersheds that support critical irrigation systems and priority protected areas may serve as initial targets for this kind of initiative.

- ♦ Existing institutional mechanisms for embedding or incorporating the IEM framework (especially the NNs) in the FLUPs, Integrated Coastal Management Plans (ICMPs) and CLUPs of LGUs are inadequate. The IEM frameworks with their strategic prescriptions should be used as basis for current and future investments, regulatory actions, improvement of local governance arrangements, joint financing, and M&E. Initiating a follow-up effort by an externally-funded project or adding this gap (as an amendment) to the existing policies on DENR and DILG partnerships may be the next action for this step and process to have a lasting impact.

pilot implementation

The pilot implementation phase covers steps 8, 9, 10, and 11. Activities in this phase have been started and will be continued even after ENRMP's completion. Other sources of funding support LGUs, DENR allocation, and other externally-funded projects will be needed to keep the implementation activities going. In the pilots, the steps and processes were not exactly carried out on a sequential manner. Some were done independently or simultaneously with each other. The gaps and weaknesses in this phase are:

- The need to refine project-established protocols before their formalization or adoption, especially in the four pilot sites. Guidelines are needed on how DENR and the LGUs will:
 - ♦ operationalize the governance bodies,
 - ♦ translate the IEM framework into various LGU ENR- plans and incorporate these in their CLUPs/CDPs,
 - ♦ enforce ENR laws,
 - ♦ support various constituents especially the different land and resource management units,
 - ♦ carry out monitoring and evaluation, and
 - ♦ finance individual and collective work plans.
- Institutionalized support from DENR and LGUs in the preparation of sub-project proposals. Under the ENRMP/GEF pilot, this step caused delays in project funding and implementation especially those sub-projects that were implemented with the DOF MDFO window. This gap reflects the reality that most LGUs largely depend on their IRA and non-IRA revenues to support their constituents. Over time, however, several LGUs in all sites have realized the value of externally-sourced funds to strengthen their local capacities and enable them to expand or deepen their assistance to marginalized communities, especially those in the uplands and coastal areas.
- A mechanism for sustaining the IEM implementation after the project completion. Presently, sustainability largely depends on the LGU's capacity and willingness to prioritize support for IEM-consistent ENR strategies and activities, work with local DENR and NGOs, and institutionalize IEM in the local governance framework and development plans as part of their CLUPs and zoning regimes.

implementation

The key activities in 12, 13, and 14 fall under implementation but were set up as separate phases in the piloting activities because these steps and processes have not been undertaken or designed by IEM-related projects in the past. Thus, the steps and processes that involve M&E system, aligning public funds, and establishing ENR-sourced alternative financing systems are new. More site-specific piloting activities are needed to assess the feasibility and practicality of these steps and processes under IEM. The gaps and weaknesses of these steps and processes are:

- The ENRMP/GEF project helped generate, design and pilot a watershed-ecosystem-wide M&E system that could be used by governance bodies, LGUs, and DENR field units. Most existing M&E systems are designed for specific ENR sub-sector and projects. They are not focused on outcomes but more on outputs from project activities. This makes the IEM M&E systems at the pioneering stage of IEM implementation. Thus, the IEM M&E system that was implemented in the piloting process cannot be fully assessed with respect to effectiveness.
- There have been many lessons in co-financing or joint financing of ENR projects and activities between DENR and the LGUs. However, the process of each LGU and DENR to individually prepare their annual investment plans and/or work and financial plans that will be funded from their respective government budgets to implement ENR activities in support of IEM framework is a new practice. Several projects such as the EcoGov Project for joint and individual funding of FLUP implementation activities were quite successful in leveraging funds in support of approved ENR sub-sector plan. But as an IEM step and process, the co-financing mechanism needs further testing to determine its effectiveness, sustainability, and feasibility. DENR field units are also quite limited in committing funds that are centrally and regionally determined to meet the agency's targets.
- With respect to the step and process of generating funds from alternative sources (whether at the watershed-ecosystem or LGU level), the most obvious sources of these funds are the "fees and charges" that are levied from ENR-dependent enterprises and industries such as irrigation, ecotourism, energy generation, and extraction of natural resources. Some ENR policies limit the setting up of public-private partnerships, especially in the multiple use zones of protected areas. There are constraints of LGUs in zoning lands of the public domains as part of their CLUPs. Policies exist on generating, managing, and reporting funds that are channeled to the Initial Protected Area Fund (IPAF) under the NIPAS law. But, there are gaps in policies with respect to irrigation fees and water for domestic use. The cost of potable water does not normally include those for conserving, rehabilitating and managing the watersheds. This is similar with respect to the ENR-dependent users in downstream areas – eco-tourism facilities such as resorts and sanctuaries, fishponds, and others. Thus, in establishing alternative sources of financing IEM, the challenge continues to be with:
 - ♦ the willingness of ENR-dependent enterprises and industries to pay fees, penalties, or royalties;
 - ♦ the willingness of the governance and regulatory bodies to conduct valuation as basis in at least determining minimum fees, penalties or royalties;
 - ♦ negotiation and entering into agreements with local governance support for collection, designated ENRM use, reporting, and auditing; and
 - ♦ institutionalizing the mechanisms for collecting, allocating, disbursing, accounting, and reporting ENR-sourced revenues from the IEM site.

3.2 Emerging Lessons and Promising Best Practices

During the planning and implementation of the ENRMP/GEF pilot sites, lessons and promising best practices have emerged. These lessons and practices are valuable in designing new IEM initiatives or tweaking existing IEM-related projects so that they reflect the lessons from the pilots.

Concerned LGUs in a watershed-ecosystem are effective DENR partners for improving governance and adopting IEM

The IEM steps and processes have opened and enhanced functional DENR-LGU working relationships that are characterized by trust, confidence, and willingness to collaborate and learn from each other. Many LGUs have realized that the DENR field staff could actually support their local development agenda, while some DENR field staff (especially the LGU coordinators) see the value and importance of LGUs and the communities for improving on-site resource management, ENR law enforcement, conservation, development, and protecting marine, bird, and fish sanctuaries.

Although this was also observed by several projects (like the Community-Based Resource Management Project, EcoGov Project and similar initiatives), the IEM activities have increased environmental awareness of LGUs with respect to their relative location in the larger watershed and how they are interconnected, interdependent, different and similar with each other. With team building, joint cross visits, training activities, formal and informal interactions, the LGU-DENR partnerships have evolved. In each of the four sites, the LGUs could now deal with DENR as “people” rather than as an abstract, impersonal, and regulatory agency. The DENR focal persons know their LGU counterparts as “individuals” rather than persons that are mixed up with certain political agenda. The DENR-LGU TWG members could look back at a stack of memories and shared activities for establishing baselines and boundaries in crafting ENR-oriented but more innovative development priorities and agenda for collaborative actions.

The growing and deepening DENR-LGU partnerships, however, need guidance, direction, and support from local champions. These champions could be the governor, a mayor, local DENR officials or an externally-supported project such as ENRMP/GEF initiative. Despite the positive experiences that are coming out of DENR-LGU partnerships and the resulting synergy from collaborative and complementary initiatives, it is unfortunate that this process has generally been project-driven and incidental in nature rather than a part of DENR’s core strategy in the integrated management of ridge to reef watershed landscapes.

The non-negotiables are the core of IEM governance and resource management strategy

As part of efforts to effectively assist each pilot to improve implementation, the ENRMP/GEF team reviewed the approved IEM frameworks and suggested focusing investments and activities on what is now generically called as the non-negotiables or NNs. These NNs, as discussed in the previous sections, have become the rallying point for individual and collective plans for implementation in a watershed-ecosystem. Almost all the local stakeholders support the idea. The NNs have become the reason for being of the governance bodies—a coalition of the willing stakeholders who represent various voices in the conservation, rehabilitation, development and management of the watershed-ecosystem landscape.

The NNs provide the boundaries and the unifying theme to ensure that the permanence of the ENR assets in the ecosystem continues. The NNs are fastly becoming the “rallying points” and “breeding centers” of local champions for IEM approach such as in Albay, Negros Occidental, and Ligawasan Marsh. Analyses of various thematic and derived maps enabled each of the pilots’ implementing teams to determine and translate the NNs for conservation, protection forests and forestlands, and

hazard zones. Although some of the shape files are based on actual GPS readings, there will still be a need to validate these maps with community consultations, samplings with GPS readings, and reconnaissance work as part of the process of translating these NNs into zones that will be supported by local ordinances.

The NNs appear to have the “information power” to generate individual and collective commitments to plan and carry out the following:

- Co-financing arrangements with funds that do not have to be pooled in one place to carry out IEM. The NNs provide the mechanisms by which each LGU and even DENR can plan and implement activities in an ecosystem in a way that is consistent with the requirements and needs of the NNs. This is happening in Bago River with the Negros Occidental province. Existing NGO projects, DENR initiatives and the Energy Development Corporation have expressed their willingness to plan and carry out activities that are consistent with NNs of Bago River IEM framework. The challenge for the Bago River Watershed Management Council (BRMWC) is to demonstrate how the individual and collective commitments will be translated into annual activities that support the NNs in the watershed.
- Compiling, managing, building, and updating available maps, plans, data, reports, and investments in each watershed-ecosystem unit.
- Strengthening and building existing or current local governance mechanisms to enhance IEM by aligning the different planning and implementation of FLUPs, CLUPs, ICM, CDPs, PDP, etc.
- Modifying and/or establishing collaborative and participatory implementation structure between DENR and LGUs.
- Developing and carrying out M&E-related activities using common outcomes and outputs.
- Providing a framework by which public and private investments support the NNs and aligning those for enhancing the ecosystem’s comparative advantage to ensure that investments for improving the value chains of competitive goods and services are sustained over time.

IPs are Resource Managers Too

There are IPs in three of the four IEM pilots, while the Bangsamoro people are dominant in Ligawasan Marsh. For effective and participatory approach to ecosystem management, both DENR and the LGUs need to recognize that the IPs have stakes and rights in the watershed-ecosystems. The project team members, with the LGUs and DENR, are learning to assist and work with the domain holders for incorporating the NNs in their ancestral domain sustainable development and protection plan (ADSDDP) to ensure responsibilities, accountabilities, and authority (RAAs) in their areas. The process should be consistent with the IP knowledge, attitudes, and practices. This has been quite a challenge in Kanan-Agos River Watershed where a certificate of ancestral domain title (CADT) was awarded. The CADT covers the whole area of General Nakar, a municipality in Quezon Province. The CADT holders have to legitimize the claims of occupants in forest lands and untitled alienable and disposable lands in the CADT area. DENR is also constrained to issue tenure instrument if the CADT goes through the Land Registration Authority (LRA). The LGU’s CLUP and FLUP have to be revised and made consistent with the CADT’s ancestral domain sustainable development and protection plan (ADSDDP).

Moreover, identifying and determining common agenda for joint DENR, LGU, and IP actions to ensure that the NNs are conserved, regulated, and protected. The process to arrive at consensus may be difficult and time-consuming. Impasse in forest protection may prevail and more damaging to the forests especially in IEM sites where IPs are not well organized and with limited capacity in land and resource management of extensive areas. In CADTs, a mechanism to resolve issues and agree on NNs-based resource management strategies. This process may be facilitated with the participation of DENR, LGUs, and IPs especially where the ancestral domains overlaps with protected areas, most of

the LGU's political jurisdiction, community-based forest management agreement (CBFMA) areas, and alienable and disposable lands.

Local champions are the key in making IEM effective

Like the experiences of other development projects, local champions are able to foresee what innovative approaches or interventions can accomplish and what may be the future impacts of the innovation. They can also help broaden the reach of the benefits. Under the ENRMP/GEF pilots, these champions were more willing to learn, adjust, get out from the bureaucratic “box,” and imagine a future where the innovation will be effective. They come from DENR project implementers, from among the site coordinators, from LGU counterparts, and local service providers. The local champions, because of their sincerity, commitment, and deeper understanding of the IEM concepts and applications, became more able to communicate, influence, and support piloting activities. Under the ENRMP/GEF pilot implementation, the local champions made a difference on how the DENR-LGU partnerships could become functional, how delays and vagueness in piloting procedures could be resolved positively, and how concepts and ideas could be translated into actions and sub-projects.

Assistance for livelihoods and enterprises to reduce poverty must be forward looking

The IEM adoption and the resulting improvement of ENRM in the pilot sites have left some stakeholders better off compared with others, especially the “free riders”—illegal occupants, poachers, encroachers, and other environment mercenaries. Higher environmental awareness always strengthens resolve for better enforcement, improved governance, and networking activities. In many cases, the marginalized communities—those who have been highly dependent on ENR land and resources for their livelihoods— are negatively affected. Assistance to these communities (in the uplands, lowlands, and riverbanks) including the IPs should focus on improving entrepreneurial capacities, providing initial working capital and strengthening tenure systems. Capacity building for livelihoods and enterprises should build on strengths and skills. Under the ENRMP/GEF pilots, the simple process of discussing, reviewing, and going through the different livelihood and enterprise proposals with the LGUs and proponents have resulted in more focused projects. The interactions between DENR, LGUs, proponents, and the technical assistance team resulted in better awareness of economic opportunities in the IEM sites, supporting enterprises that are geared towards higher value chains of key commodities, and establishing forward and backward linkages of existing enterprises. Some examples of these enterprises are broom making and establishing tiger grass farms, abaca handicrafts with stripping machines and abaca plantations, fuelwood lot development, fish drying and paper making from water hyacinth. The potential of these livelihood activities and enterprises to be sustainable is high because they are founded on local practices, knowledge and skills; and there are relatively large consumer markets

3.3 Effectiveness and Efficiency of IEM Steps and Processes

Based on the assessment, each step and process in the planning and implementation in the IEM pilots were rated as either effective or inefficient (Table 2).⁶ The assessment mostly used observation and feedback from field visits and consultations, reported results, reactions from the DENR-LGU implementing teams during meetings, and reports of the World Bank missions. However, the assessment has been partly subjective due to the lack of survey questions or conduct of focus group discussions (FGDs).

⁶ Drucker, P. 2002.

Table 2. Assessment of Effectiveness and Efficiency

IEM Processes	Effectiveness	Efficiency
<p>1. Select watershed-ecosystem sites. Identify, assess, prioritize, and select sites in the region or province (or sub-watershed in a municipality or city)</p>	<p><u>Effective</u> approach if the process will be participatory with a set of criteria and prioritization that are based on agreement among stakeholders</p>	<p>This process is <u>efficient</u>; it will simply expand what DENR is currently doing.</p> <p>Efficiency will improve with more systematic storage of maps, reports, assessments, and plans on each watershed at the DENR region, and by province within a region</p>
<p>2. Scope, consult, and orient local stakeholders. Conduct stakeholders consultations and orientation on IEM in selected sites</p>	<p><u>Effective</u> as an approach to initially engage the potential partners and beneficiaries of the IEM. The expressions of their needs, issues, and concerns will improve connectivity of IEM strategies with the needs of stakeholders</p>	<p><u>Efficient</u> provided consultations and orientations are carried out with LGUs and other partner agencies and organizations especially those with ongoing projects and activities in the watershed-ecosystem</p>
<p>3. Organize technical working groups (TWGs). Create, form, and orient TWGs and governance body for the IEM framework and ENR planning</p>	<p><u>Effective</u> approach to formalize working relationships between DENR, the LGUs and other partners</p>	<p><u>Efficient</u> as institutional processes are in place for the issuance of special orders, executive orders, and conformer letters among concerned agencies and organizations</p>
<p>4. Train and coach TWG members in generating IEM framework and incorporating it in LGU ENR plans as part of their FLUP/CLUPs, CDPs, and AIPs. Training includes cross visits to ongoing IEM-related initiatives</p>	<p>The revised training modules for planning and implementing IEM may be more <u>effective</u> in generating NNs-based IEM framework.</p> <p>Cross visits were effective</p> <p>Training modules need further testing and refinement</p>	<p><u>Not yet efficient</u> as the process of developing DENR and LGU capacities are still ongoing</p>
<p>5. Develop IEM framework: Prepare, review, revise, and obtain approval of IEM Framework Plan (authorizations of each LGU council including provinces, and endorsed by DENR field units) based on non-negotiables, comparative advantage, and competitive goods and services</p>	<p>This process is <u>effective</u> especially when the TWGs are motivated and capacitated</p>	<p>This process is <u>not efficient</u> as it is still very much driven by local service providers rather than by DENR and LGU staff.</p>

Table 2 (continued). Assessment of Effectiveness and Efficiency

IEM Processes	Effectiveness	Efficiency
<p>6. Create or strengthen IEM governance body and mobilize review, approval, and implementation of DENR and province-wide activities such as M&E, IEC, investment promotions, policy advocacy and improvements</p>	<p>The process in creating the governance bodies is <u>effective</u>; but needs improvement since the review and approval process that largely depends on the body's understanding of IEM</p>	<p><u>Inefficient</u> due to heavy infusion of project funds especially in the conduct of orientation, training, and getting the governance body review and adopt the IEM framework</p>
<p>7. Develop LGU ENR plans consistent with the IEM framework. Help LGUs incorporate the IEM framework in their respective ENR plans with selected ENR sub-sectors (FLUP, ICM, solid waste, waste water) as entry points (endorsement or approval by SB and LCE, and affirmed by the Watershed Management Council (WMC) or expanded PAMB)</p>	<p><u>Effective</u> but needs more testing on how the different ENR sub-sector plans are incorporated in the LGU CDPs and how DENR field units are able to align their work and financial plans in support of the IEM framework</p>	<p>Currently, this process is <u>not efficient</u> as ENR plans are prepared by sub-sector rather than integrated and embedded in the CLUPs, CDPs and PDPs.</p>
<p>8. Strengthen the LGU-DENR steering committees as they plan, implement, review progress, resolve issues, co-finance, and direct LGU-specific IEM-ENR activities</p>	<p>This approach is <u>effective</u>, but needs more piloting or replication in IEM sites</p>	<p><u>Inefficient</u> because this process is mostly supported and carried out by projects rather than by mandated institutions.</p>
<p>9. Assist LGUs in the implementation of their IEM-consistent ENR plans as part of their CLUPs and CDPs</p>	<p><u>Effective</u> but needs policies to set up and institutionalize the process</p>	<p>This can be made <u>efficient</u> provided the policies and technical support are in place.</p>
<p>10. Facilitate periodic meetings of IEM governance body to assess and guide IEM implementation as carried out through the DENR and province-led activities and LGU-led activities; provide oversight; initiative or act on recommendations to improve local policies; and help resolve issues</p>	<p><u>Effective</u> but institutional mechanisms and protocols need to be formalized for each watershed-ecosystem</p>	<p>This is not currently efficient, but can be made <u>efficient</u> by improving local capacities to facilitate and document meetings, prepare agenda in advance, and organize the actual conduct of those meetings to achieve specific objectives.</p>

Table 2 (continued). Assessment of Effectiveness and Efficiency

IEM Processes	Effectiveness	Efficiency
11. Assist LGUs in the preparation of work plans and project proposals to leverage funds from MDFO, NGAs, NGOs, and private sector. ENRMP supported sub-projects through the DOF/MDFO for rehabilitation, capacity building, planning, and livelihoods	<u>Effective</u> with the help of local service providers. Capacities of LGUs and DENR field staff have to be strengthened with respect to identifying innovations and opportunities for strategic rehabilitation, livelihoods, and backyard enterprises	This is currently <u>inefficient</u> because of relative dependence on LSPs; needs to be linked as a process with DOT, DA, DTI, local chambers of commerce, and financing institutions
12. Establish simple, useful, and replicable M&E system for the IEM site and in each LGUs based on common outcomes and outputs	<u>Effective</u> in terms of <u>determining key outcomes</u> and outputs but still too early to fully assess how the M&E system will fit existing systems	<u>Inefficient</u> . It will need more refinements and simplification.
13. Align and/or leverage financing from public and private sectors in support of the IEM-wide and LGU-specific ENR plan implementation	<u>Effective</u> in leveraging LGU funds as part of their IRA and DENR project funds. DENR, however, has yet to establish mechanism to align its activities in support of the IEM-consistent work plans and in support of LGUs.	<u>Not currently efficient</u> but can easily be done with low cost if protocols through JMC and provincial EOs and resolutions will use existing mechanisms (CLUP, comprehensive development plan, provincial development plan, annual investment plan with support ordinances) at the LGU and DENR (annual work and financial plan) levels to support IEM implementation.
14. Establish ENR-sourced funding mechanisms to augment IEM implementation	<u>Effective</u> as a source of alternative financing in other sites; but the establishment of mechanisms to generate ENR-sourced revenues for re-investments has yet to be set up, formalized, and made operational	<u>Not currently efficient</u> because of its high dependence from well-trained economists and institutional specialists.

Assessment of effectiveness and efficiency is generally used to gauge an intervention's or activity's readiness⁷ for expanding or scaling up, as well as its sustainability.⁸ The degree of effectiveness and efficiency was not determined in this assessment.

A step or process was rated as effective if it was able to contribute in delivering the expected defined outputs towards achievement of the overall IEM objective. The key factors that influence effectiveness in carrying out the steps or process are the capacity of the DENR field staff and LGU counterparts including the local service providers (LSPs), establishment of clearly defined direction with provision of guidance and mentoring, and adequacy of support system. Effectiveness is simply doing the right

7 Korten, D. 1980. <http://www.jstor.org/stable/3110204>.

8 Gillespie, S. 2004.

thing, but also involves technical and governance leadership. This is also where the right LSPs or advisors must be engaged to provide guidance, direction, and capacity building activities for the DENR-LGU TWGs or implementing teams.

Assessment of efficiency was simply based on the relative cost per unit of carrying out the activities under each of the IEM step or process. The overall measure was the completion of the activities under each step with the allocated budget or funds for planning and implementing the activities. When project funds are needed to engage consultants and specialists or engage resource persons for helping or doing the step or process, it meant that the institutions (DENR and LGUs) do not have the necessary systems in place for performing the tasks on a regular basis. This would make that process or step “inefficient.” In some cases, systems are not in place for proper collection, storage, analysis, and updating of information or data that are critical for the step or process. Efficiency is simply “doing the right things rightly at the right time.” Efficiency is not a good measure if the step or process is NOT effective – not able to achieve or contribute towards achieving the objectives. Efficiency is not justified when the intervention is not able to achieve the objective.

Steps and processes that are effective and efficient may be considered as ready for scaling up and are sometimes termed as “best practices.” For those that are only effective but not yet efficient, there might be a need for further replication to refine, modify, or simplify the step or process. Steps that are not effective and efficient are simply not accepted and worth replicating at all.

The challenge of scaling up IEM is a continuing saga as advocates continue to influence changing of mindsets within the DENR and LGU bureaucracies. As summarized by Drucker (2006), to achieve replication and scaling up, an innovation such as the IEM approach, must have the following characteristics:

- Purposeful and systematic. Institutional mechanisms must be in place to make DENR and LGU officials realize how IEM can open up more social, economic, entrepreneurial, institutional, and technical opportunities for the benefit of communities in and outside the watershed-ecosystem.
- Conceptual and perceptual. IEM must be based on sound theories of ecosystems management while being refined, adjusted, and configured to meet needs and demands of its customers - communities, private sector, resource management units, LGUs, DENR field units, and other partners.
- Simple and focused. IEM as an approach must not be dependent on LSPs, advisors, complex analyses, and complicated institutional arrangements. It should be a strategy that could easily be translated into doable and implementable set of activities that are consistent with the NNS, broken down into individual and collective actions towards common goals and objectives.
- Small but with the perspective of becoming big in the future. IEM may just start with the four ENRMP/GEF pilots in the regions where they were implemented, but would generate so much interest and demand that it could be replicated and scaled within the province, region, island groups, or even at the national levels.
- Capable of exploiting strategic opportunities. IEM can respond to the present and future challenges of climate change as they impact production, resource conservation, and supply of ecosystems goods and services; and reduction of risks from natural disasters. To this end, IEM must be “bought” by the local, provincial, and regional leaders so that they themselves will advocate the replication and scaling up of this approach in all watershed-ecosystems within their political jurisdictions and are embedded in their CDPs and PDPs.

Table 2 underlines the relative effectiveness and efficiency of the 14 IEM steps and processes. All the 14 steps and processes are rated as effective based on results and outputs or based on designed outputs. However, only four steps and processes could be performed efficiently at this point. The

degree of effectiveness and efficiency vary from site to site and steps and processes. At this stage of IEM implementation, at least four steps and processes (steps and processes numbers 1, 2, 3, and 9) are recommended for either replication and/or scaling up. These steps and processes are simply carried out or expanded using existing institutional practices of DENR and the LGUs. They are also relatively independent steps and processes which serve as inputs or pre-requisites to other IEM steps and processes.

Table 3 lists what IEM steps and processes may be replicated or scaled up with recommended actions for further observations and refinements. Since the IEM is an intervention, the replication and scaling up activities must be considered as additional observation points for learning, refining, and improving the IEM approach. Replications will have the greater advantage of a broader source of learnings if they are designed and conducted in different regions, cultures, and local environmental governance set-ups. Replication activities may use the same design in the pilots and may be implemented in a different location, social setting, or with different objectives, e.g., to further test effectiveness or improve efficiency.

Scaling up interventions is expanding the coverage of effective and efficient steps and processes. Normally, the practices are further simplified to reduce the overall program cost before extensive implementation. Scaling up may happen in other watershed-ecosystems within a province, from a province to all provinces within a region, or from regions to national adoption. During the scaling up or expansion phase, a certain degree of effectiveness is sacrificed to have a wider reach and impact of the interventions.⁹ This calls for a management decision and action.

For replication or scaling up the IEM steps and processes, the key considerations and questions are the following:

1. **Is there a designated unit** to plan and implement the IEM step or process and carry out further observations and assessments with the necessary recommendations to improve effectiveness and/or efficiency? The draft IEM guidelines for planning and implementation may be revisited to incorporate this recommendation.
2. Are the designated units and supervisors/advisors assigned covered **with SOs or executive orders**?
3. **Are there trained and available staff** for replication or scaling up? Capacities of DENR and LGU staff are crucial for either replication or scaling up. Otherwise, the replication or scaling up efforts should be beefed up by engaging national and local experts.
4. **Are there support systems** for replication or scaling up (policy, facility, equipment, access to specialists and external expert advice, training, etc.)?
5. **Are there local and national linkages and resource institutions** that could be accessed from other agencies or higher offices i.e. district or province agricultural offices?
6. **Is there a mechanism to periodically assess** progress of replication and/or scaling up established at the ecosystem, LGU, and DENR levels?
7. **Is there funding support committed** for the replication or scaling up at the LGU and DENR?

The effectiveness and efficiency of the IEM steps and processes, especially those that are concerned with post-ENRMP implementation by the LGUs and local DENR (steps and processes numbers 8-14) have implications on the following:

⁹ Korten, D. 1980.

- Sustainability of the four IEM pilots after 2013. The sustainability of the governance bodies and their capacity to oversee, direct, assess progress based on M&E outcomes and outputs, and leverage funding support for collective and individual activities are the key to sustainability of the ENRMP/GEF pilots. Post ENRMP activities should be geared towards these capacity building efforts.
- Region- or provincial-led replication and scaling up of IEM steps and processes in the ENRMP/GEF pilot regions – especially in Regions 4a, 5, 6, and 7. In these areas, initial seeds of IEM awareness, capacities, and understanding have been planted. There are also local champions in each region. It is just natural that the initial efforts to replicate or scale up to adjoining watershed-ecosystems within the province are going to happen. These will be in addition to the ongoing replications in Quinali Tres A in Albay, Pola and Bongabong watersheds in Oriental Mindoro, and maybe in the pilot areas of the National Convergence Initiatives (NCI).
- Sharing of lessons and challenges even after the post ENRMP/GEF project implementation. These may be initiated by the concerned provinces and DENR region with minimal assistance from DENR Central. The lessons from the ENRMP pilots may be shared with DENR RBCO especially on how the pilots are continuing with locally-led coordination and implementation.

4.0 Suggested Road Map for Replicating and Scaling Up the IEM Strategy

Replicating or scaling up the IEM approach and strategy is needed to avert the worsening negative environmental impacts of the current fragmented approach to ENRM at the watershed-ecosystem level. Towards this end, a road map may be used to serve as a guide for improving the governance and management of watershed-ecosystems and prioritizing complementary public and private investments. It will also build on existing policies and what ENRMP/GEF project and other related projects (completed and ongoing) have learned. The road map will offer the IEM framework as the means of unifying and aligning different local and national plans and strategies that target and operate in the same watershed-ecosystems.

At the highest policy and strategic level, the PDP 2011-2016 has defined the overall IEM direction and the strategy is now being embedded in several policies. Directly or indirectly, the National Convergence Initiatives (NCI) of the Department of Agriculture (DA), DENR, Department of Agrarian Reform (DAR), and Department of Interior and Local Government (DILG) is a prototype of IEM that covers ridge to reef watershed landscapes. The challenge, however, is translating the concept of “convergence” in the pilot sites. For IEM to be replicated and scaled up, it has to have clearly defined goals and objectives; delineated tasks that specify responsibilities, accountabilities, and authorities for decision making and actions; arrangements for effective collaborative working relationships in priority watershed-ecosystems; and allocation of necessary human and financial resources for replication and scaling up activities. With the effectiveness of most of the IEM steps and processes, further replication and scaling up will further simplify and clarify how this strategy can contribute to programs and actions towards the achievements of the goals defined in the PDP 2011-2016.

An IEM approach under the PDP 2011-2016 will directly or indirectly affect the lives of almost 60 million Filipinos in the coastal areas, more than 20 million people in the upland areas, and more than 15 million in the urban and lowland settlements. It will positively impact ENRM in the 140 priority watershed-ecosystem landscapes that support irrigation, energy generation, ecotourism, and domestic and industrial water uses. It will clarify what can be done and cannot be done in lands of the public domains especially in highly diverse areas and protection forests and forestlands. It will also lay down the foundation for formulating rules to incentivize investments of communities and the private sector.

In the end, the IEM will have to engage provinces, cities, and municipal LGUs with the DENR, DA, DAR, Department of Tourism, Department of Energy, and Department of Social Welfare and Development as national government agencies. They will provide technical advice, guidance, and measures to ensure compliance to ENR regulations. DENR is mandated to focus its IEM support and assistance in

the management and regulation of non-negotiable areas, especially in the conservation and protection forests and forestlands and in the coastal/foreshore zones. Over the coming years, DENR will continue to heavily invest in rehabilitation or restoring degraded ecosystems with the active participation of LGUs, communities, and the private sector.

Table 3 summarizes what can be replicated or scaled up among the 14 IEM steps and processes, along with recommendations to improve the steps and processes. DENR should take the lead in replicating and scaling up the steps and processes that are emerging to be effective and efficient. Completing the outputs of these steps and processes are good investments towards IEM framework preparation and adoption by the concerned LGUs and DENR regional offices. To move forward, the replication and scaling up of the IEM steps and processes in each DENR region and selected provinces may start to assess the following areas of concerns:

- Expressed willingness of the different ENR sub-sectors and the concerned LGUs to adopt the IEM strategy in priority watershed-ecosystems;
- Perceived effectiveness and efficiency of the IEM steps and processes in the regions with respect to local capacity, readiness, willingness of the LGUs to participate, existing ENR-dependent investments and enterprises, and urgency;
- Current national and local policies and incentives for the LGUs, resource management units, and ENR-dependent industries and enterprises for collaborative management in watershed-ecosystems; and
- Adequacy of database of key watershed-ecosystems at the regional and provincial government offices.

The seven considerations (discussed in the previous section) for replication and scaling up have to be carefully assessed before or at the early stage of implementation. It has been pointed out that lessons on sustainability and scaling up of innovative interventions such as the IEM approach largely depend on existing and potential capacities as stated below.

“Capacity is more than simply resources, however; it also includes motivation and commitment, which, in turn, require appropriate incentives at all levels. Capacity development takes time and resources, but it is an essential upfront and ongoing investment, with the capacity and commitment of facilitators and local leaders being particularly important. A learning by doing culture, one that values adaptation, flexibility, and openness to change needs to be fostered at all levels, with time horizons adjusted accordingly.”¹⁰

4.1 Pathways for Replication and Scaling Up

DENR may replicate and scale up IEM through three possible pathways. These are: (a) supply-driven, (b) demand-driven, and (c) a combination of the two. The first two are going to be discussed in this section. As shown in Table 3, some IEM steps and processes can only be replicated after further refinements to improve their effectiveness, while a few may be replicated and scaled up in selected sites. In all the possible pathways, DENR and the LGUs (including donors and local service providers) may be required to document areas for improving effectiveness (completing the outputs of each step and process), efficiency (cost per output), and the results of scaling up some steps and processes. Documenting and sharing lessons learned from additional pilots for replication and scaling up will help accelerate the process of directing IEM towards more expansion that will cover more watershed-ecosystems in the country.

10 Gillespie 2004.

Table 3. Specific Recommendations for Replication and Scaling Up

IEM Processes	Replicate	Scale Up	Specific Recommendations to Improve the Process
<p>1. Select watershed-ecosystem sites. Identify, assess, prioritize, and select sites in the region or province (or sub-watershed in a municipality or city)</p>	✓	✓	<p>Establish a system for collecting, storing, updating, and accessing thematic and derived maps at the DENR region and in each province by region</p> <p>Refine and simplify protocol for assessing and prioritizing watershed-ecosystem for investments</p>
<p>2. Scope, consult, and orient local stakeholders. Conduct stakeholders consultations and orientation on IEM in selected sites</p>	✓	✓	<p>Establish protocol for this process through the existing NCI governing body (composed of DENR, DA, DAR, and DILG) as part of the convergence strategy under the PDP 2011-2016</p>
<p>3. Organize technical working groups (TWGs). Create, form, and orient TWGs and governance body for the IEM framework and ENR planning</p>	✓	✓	<p>Refine and simplify the IEM orientation materials (primer, powerpoint presentations, Q&As, etc.) for nationwide orientation</p>
<p>4. Train and coach TWG members in generating IEM framework and incorporating it in LGU ENR plans as part of their FLUP/CLUPs, CDPs, and AIPs. Training includes cross visits to ongoing IEM-related initiatives</p>	✓	✗	<p>Refine the IEM training modules and conduct training of trainers composed of DENR, LGU, LSPs in each region targeting the priority watersheds</p> <p>Revise manuals and guidelines on IEM framework preparation</p>
<p>5. Develop IEM framework: Prepare, review, revise, and obtain approval of IEM Framework Plan (authorizations of each LGU council including provinces, and endorsed by DENR field units) based on non-negotiables, comparative advantage, and competitive goods and services</p>	✓	✗	<p>Based on the replications, simplify and refine guidelines on the participatory approach in preparing, reviewing, getting approval, adopting, and jointing implementing the IEM framework</p>
<p>6. Create or strengthen IEM governance body and mobilize review, approval, and implementation of DENR and province-wide activities such as M&E, IEC, investment promotions, policy advocacy and improvements</p>	✓	✗	<p>Criteria for reviewing and adopting IEM framework should be included in the protocol for adoption by the NCI governance body. Each province and LGUs must adopt the criteria.</p>
<p>7. Develop LGU ENR plans consistent with the IEM framework. Help LGUs incorporate the IEM framework in their respective ENR plans with selected ENR sub-sectors (FLUP, ICM, solid waste, waste water) as entry points (endorsement or approval by SB and LCE, and affirmed by the Watershed Management Council (WMC) or expanded PAMB)</p>	✓	✗	<p>The process needs to be refined and simplified and should underline the commitment of LGUs and DENR field units to support the IEM-consistent ENR plans.</p>

Table 3 (continued). Specific Recommendations for Replication and Scaling Up

IEM Processes	Replicate	Scale Up	Specific Recommendations to Improve the Process
8. Strengthen the LGU-DENR steering committees as they plan, implement, review progress, resolve issues, co-finance, and direct LGU-specific IEM-ENR activities	✓	✗	This can be set up through existing DENR-DILG joint memorandum circulars (1998-01 and 2003-01) as one of the regular functions of DENR field units with the LGUs in their jurisdictions. The steering committees can be good starting points for the IEM preparation and implementation processes.
9. Assist LGUs in the implementation of their IEM-consistent ENR plans as part of their CLUPs and CDPs	✓	✓	To a degree, this is now being done by DENR field staff Need to align existing ENR sub-sector plans consistent with the IEM framework Develop guidelines for incorporating the different ENR sub-sector activities with the approved IEM framework
10. Facilitate periodic meetings of IEM governance body to assess and guide IEM implementation as carried out through the DENR and province-led activities and LGU-led activities; provide oversight; initiative or act on recommendations to improve local policies; and help resolve issues	✓	✗	Use existing policy guidelines and protocols but need to set up specifics for financing, M&E, and translating decisions into programs and actions at the LGU's and DENR's assistance to different resource management unit (RMU) in the watershed-ecosystem area.
11. Assist LGUs in the preparation of work plans and project proposals to leverage funds from MDFO, NGAs, NGOs, and private sector. ENRMP supported sub-projects through the DOF/MDFO for rehabilitation, capacity building, planning, and livelihoods	✓	✗	Conduct training of trainers among LGUs and DENR field units, NGOs, and training institutions in target regions. This approach may be linked up with some of the pilots of NCI.
12. Establish simple, useful, and replicable M&E system for the IEM site and in each LGUs based on common outcomes and outputs	✓	✗	This will need further testing as the outcomes and outputs are translated into PMP per site and completing the process of analysis, writing, reporting, and feed backing and instructions for next steps from the governance bodies.

Table 3 (continued). Specific Recommendations for Replication and Scaling Up

IEM Processes	Replicate	Scale Up	Specific Recommendations to Improve the Process
13. Align and/or leverage financing from public and private sectors in support of the IEM-wide and LGU-specific ENR plan implementation	✓	✗	Protocols and mechanism for individual and collective financing from public and donor funds have to be set up through policy guidelines and agreements
14. Establish ENR-sourced funding mechanisms to augment IEM implementation	✓	✗	Further testing and piloting are needed to establish the protocols and methodologies including negotiation and agreements on collection, re-investments in the watershed, reporting, sharing, disbursement, and auditing.

Supply-Driven Replication and Scaling Up

Under a supply-driven approach for IEM, DENR, in collaboration with the concerned national agencies such as those already involved in the NCI, may simply issue a policy through an administrative order, co-issue a joint memorandum order with other national agencies, or facilitate the issuance of a presidential executive order consistent with the PDP 2011-2016. A supply-driven approach has always been the option for innovations or initiatives. In this case, the government takes the risks in case the IEM may not be sustained over time. The State has all the reasons to take the risks since current approaches are not as effective as they should be. The rationale for the adoption of a national IEM policy may be the following:

- The need to ensure that national and local ENR-dependent investments to sustain the supply of watershed-ecosystems' goods and services such as water for irrigation, energy, domestic use and recreation are sustained. The adoption of IEM is the most viable strategy. Immediately, DENR in collaboration with DA, DAR, DOE, DOT and the different LGU leagues may issue a joint resolution that will prioritize IEM in all the 140 priority watershed-ecosystems.
- The need to reduce the risks and damages from natural calamities brought about by erratic weather patterns resulting from climate change.
- Conservation of biodiversity and critical habitats in the watersheds, whether these areas are within or outside the coverage of National Protected Area Systems (NIPAS).
- Adjustment and increase of ENR-sourced revenues from ENR-dependent industries and enterprises for re-investments in watershed-ecosystems.
- Improving governance to incentivize functional partnerships with LGUs, resource management units, and the private sector in the watershed-ecosystems.

Under a supply-driven approach for replication and scaling-up, it is assumed that DENR will initiate the processes in:

- issuing or facilitating national policies,
- designing and carrying out capacity building program for its own national and regional staff and the LGU counterparts,
- formulating short-, medium-, and long-term programs,
- modifying necessary planning and budgeting processes and requirements to the point where the programs/projects/activities (PPAs) in the GAA is increasing supportive of ecosystem management,

- operationalizing through the different ENR sub-sector bureaus and units including the River Basin Control Office (RBCO), DENR field units, and partner LGUs, and
- aligning current programs and projects towards an IEM approach.

A two-stage supply-driven pathway may be adopted. The first phase may focus on improving capacities and readiness, improving database and analysis, prioritization, and programming for human and financial resources. An IEM pilot per region may be set up for replication as basis for the further refinement of existing or proposed policies, planning, and budgeting processes. During this phase, capacity building activities may be designed and implemented. IEM training modules may be incorporated in the DENR CENRO Academy and even with DENR's partnership arrangements with training and academic institutions such as the Development Academy of the Philippines.

During the first phase of the two-stage supply-driven approach, the regional pilots will continue to generate lessons, insights, and recommendations. These could help DENR fill up current gaps or weaknesses of the IEM steps and processes, policies, support systems, governance and collaborative arrangements. Emerging best practices and how to simplify them for scaling up may be filtered through various workshops and round table discussions. The following gaps listed below will limit IEM replication and scaling up if not adequately and timely addressed:

- A more systematic and organized system for collecting, updating, storing, retrieving and accessing thematic and derived maps in both digital and hard copies. This system may be set up at the regional and LGU province levels with the assistance and support of the ENR sub-sector bureaus, National Mapping and Resource Information Authority, and other related agencies. The implementation of the DENR Rationalization Plan will facilitate the integration of sectoral data bases at the province, region, and national levels.
- A protocol and institutionalized system for prioritizing watershed-ecosystems at the regional and provincial level based on agreed upon criteria with LGUs, relevant national line agencies, and DENR technical bureaus.
- Expanding the coverage of the current system of watershed characterization, which is mainly focused on the forestlands/delineated watershed and not over the ridge to reef landscape. The characterization should also be able to capture issues and opportunities for a deeper understanding of the ecosystem concept, various environmental goods and services, and threats.
- Alignment of the current GAA PPAs based on priority watershed-ecosystems. This will be helpful in replicating and scaling up IEM at the regional level. It will render more effective coordination and complementation of efforts of various ENR sub-sectors and still achieve their plans and targets.

Specific activities that may be carried out by DENR central and each region during the first phase of supply-driven approach to replication and scaling up are:

- Provide further assistance to the ENRMP/GEF IEM pilot sites so they can become the learning sites for the planned replications. The current pilots and the lessons, documentations, and trained staff may be able to help other regions who intend to pilot IEM.
- Align and facilitate use of existing resources (including those of foreign-assisted projects) in support of the IEM pilots per region. Ongoing or newly-approved projects that could easily be aligned are the DENR's National Greening Program (NGP), ADB-funded INREM Project, JICA-supported FMP, USAID-funded B+WISER, and GiZ-funded projects in Central, Western and Eastern Visayas regions. Guidelines for orientation and alignment existing resources in support of IEM have to be prepared and issued by the DENR Secretary.
- Review and modification of existing DENR policies on Integrated Watershed Management (IWM) and related policies such as the department administrative orders (DAO) on devolution, tenure system, and protected areas may be needed in support of the IEM strategy. A DENR DAO that will lay out IEM implementation guidelines combined with the DAO on ENR devolution will certainly accelerate replication and maybe scaling up.

- Instructions to the DENR regional units on identifying, prioritizing, and preparing IEM-related activities especially on the need to collect, store, update, and analyze digital and hard copies of maps and data for each of the watershed-ecosystems in each region. Scaling up may be by region with provincial governments or cluster of LGUs in target watershed-ecosystems. The DAO on IEM guidelines will have to provide procedures for complementation, partnership, and joint implementation with LGUs to support various land and resource management units in the watershed-ecosystems.

The second phase of the two-stage supply-driven pathway may start after synthesizing lessons and recommendations from the first phase. This may take one or two more years depending on how the pilot in each region will be quickly mobilized under existing policies, capacities, and resources. Modified policies and guidelines may be issued to lay down specific targets, outputs, incentives, structures and reporting systems with defined RAAs, outputs and outcomes of the M&E system, and financing arrangements. It is envisioned that the supply-driven pathway will increase overall IEM awareness among LGUs, DENR field units, resource management units, the private sector, civil society, and others. If this occurs, the IEM replication and scaling up would have transitioned towards the “demand-driven” approach.

Demand-Driven Replication and Scaling Up

As the term implies, a demand- driven approach to IEM replication and scaling up means that DENR simply issues the policy in response to the increasing “interests” and requests from LGUs, donor-driven projects, other government agencies, civil society, and the communities. The demand-driven pathway does not happen overnight. It always starts with little innovation, project investments, orientation and awareness campaigns, linking the approach with major regional or national tragedy or incident, and massive public investments that require major shift in strategy. After all, IEM is consistent with PDP 2011-2016 and other policy issuances. DENR responds to the increasing demand by policy issuance and providing technical and organization support for replicating and scaling up of the IEM approach.

The more advanced LGUs may demand assistance and support from DENR to help them address issues that relate with the need to sustain key ecosystems goods and services in their province or localities such as water for irrigation, domestic use, or recreation; the need to reduce disaster from natural calamities especially landslides and flooding; and the need to align public and private investments in agricultural and coastal areas consistent with their CLUPs.

Under the demand-driven approach for IEM replication and scaling up, DENR’s capacity and readiness to respond to the requests of LGUs, NGOs, and the private sector for assistance, maps, and technical support will be put to test. These requests are expected as more and more LGUs, the civil society, and communities will start looking for or blaming DENR for the climate change-related disasters, reduced productivity, black outs in areas where energy depends of hydro-electric power, increased incidence of pests and diseases.

DENR will have to adequately respond with updated information on watershed-ecosystem such as thematic maps, relevant data, technical support for training and analyses, guidance in IEM framework formulation and crafting of necessary agreements between and among the different stakeholders especially among LGUs and between LGUs and the DENR field offices. To enable DENR to properly respond, the regional offices should do the following:

- Designate an office/unit to take the lead in coordinating with the province and cluster of LGUs in identified priority watershed-ecosystems.
- Create an inter-sector IEM assistance group from the DENR field units that could easily be deployed or assigned to assess database, maps, etc.
- Conduct capacity building training, orientation, and cross visits for DENR staff.

- Coordinate with DENR planning units (national and regional) on how expenditures in support for IEM may be funded out of existing PPAs until they are modified or revised.
- Facilitate the creation of local governance bodies as venues for consensus building and coordinating demand for IEM assistance. This will ensure that requests and initial agreements for planning and implementation are formalized for succeeding activities.

The ENRMP/GEF project's experience under the demand-driven approach was through the request of the province of Oriental Mindoro to support IEM in the Pola and Bongabong watersheds, both in Mindoro Occidental. DENR agreed to support initial activities in response to provincial interest. The initial work in Bongabong Watershed was in response to local requests and interest of local politicians. Especially the Office of the District Representative of Oriental Mindoro. DENR, through the ENRMP/GEF project team, provided the initial orientation and training for the LGU and DENR field staff. At this point, however, the sustainability of the Pola and Bongabong IEM sites with initial DENR support will largely depend on how the LGUs will support and follow the 14 IEM steps and processes. The DENR/PENRO in return may have to gradually align its NGP funds as counterpart to the LGU and donor funding support for these two replications sites.

The replication in Quinali Tres A, Albay province was in response to the request of the provincial government. DENR through the ENRMP/GEF project conducted IEM orientation, analyses, mapping, and guidance in the formulation of the IEM framework. It was understood, however, that after the adoption of the framework, the provincial government, with DENR Region 5 and support of other agencies, will implement IEM through the concerned LGUs, national government agencies, and donor funds. DENR 5 and the concerned provincial governments (Albay, Camarines Norte, Camarines Sur) intend to further replicate the Libmanan-Pulantuna and Quinali Tres A experience into the other six watersheds of the Bicol River Basin. In this case, replication is happening because of increased capacity of the DENR Region 5, province, and local service providers from the initial ENRMP/GEF experience, strong political interests, commitment of a DENR Region 5, and restructuring of the Bicol River Basin Office.

The NCI has adopted the IEM strategy as its unifying framework for investments to conserve and regulate the NNs, enhance the ecosystem's comparative advantage, and support higher value chains for the ecosystem's competitive goods and services. NCI thinks that this approach will pave the way for the LGUs in each of the targeted "watershed-ecosystems" to incorporate the IEM framework in the preparation of their FLUPs/CLUPs and eventually into their comprehensive development plan and/or provincial development plans. This development has provided an avenue on how the NCI agencies – DENR, DA, DAR, and DILG – may be able to complement investments at the watershed-ecosystem level in support of the IEM-consistent LGU development plans.

4.2 Recommended Option for IEM Replication and Scaling Up

Given the large stake of the State to ensure that its investments on ENR-dependent utilities, public enterprises, and ecotourism promotion campaigns do not go to waste, it is suggested that a supply-driven approach be adopted as described and partly outlined above. The ENRMP's pilots fall under the supply-driven perspective. The pilots were designed to generate doable steps and processes for implementing IEM with the end view of having a national policy and support system that will trigger replication and scaling up. Indirectly, however, the issuance of DENR policy also responds to increasing public clamor regarding the need to manage the watershed-ecosystems to minimize damages from climate change-related natural disasters such as landslides and flooding. Stakeholders are realizing that IEM may help reduce damages from calamities. Reduction will also mean more funds for investments that will increase productivity and strengthen the resilience of ecosystems and communities. Savings could be used for reforestation, stream bank rehabilitation, enforcement, capacity building, and support for livelihood systems.

Initially, however, a supply-driven approach will be costly. Investments are needed to strengthen DENR's and LGU's capacity to "market" and support the IEM approach. As demand increases, there will also be the need to respond to the increasing demand for IEM assistance from various clients. Several groups will demand for updated thematic maps, training and orientation, and development of local-based enforcement systems to ensure that the conservation areas and protection forests and forestlands are protected and not abused. There will also be increasing demand for financial and human resources to implement the approved IEM framework especially in critical watershed-ecosystems and areas that are highly vulnerable to the impacts of climate change.

5.0 The Need for Policies that Respond to IEM Requirements

The replication and scaling up need national policy statements in support of the PDP 2011-2016. These policies will lay the foundation for a supply-driven approach for replicating and scaling up IEM. They will also translate the intent of DENR senior management to pilot the IEM in each region as start-up activities that will further refine the implementation steps and processes. This section provides the key policy areas that are needed to trigger replication and scaling up of IEM activities with DENR initiatives and partnerships with LGUs.

There are at least five policy areas which DENR have to gradually improve or modify to fit the requirements of IEM replication and scaling up under the suggested road map discussed above. These are the following:

1. Broadening the scope and coverage of the current DENR policies in characterizing, assessing, and prioritizing watersheds to cover the total area of the ridge to reef landscapes. This policy will also specify how the different governance frameworks for each type of lands of the public domain in the watershed-ecosystem are included in the characterization and assessment processes. This means that the characterization and assessment by region will be based on thematic database and will include forest/timber lands, protected areas, agricultural lands, and mineral lands including those that are under the ancestral domain claims. The assessment will also list and analyze the linkages and connectedness of the upper, middle, and lower portions of the watershed including the various ENR-dependent users, enterprises, and industries. A total ridge to reef landscape will also include the municipal waters of coastal LGUs since these areas are crucially linked with the upper and lower portions of the watershed. An initial draft for expanding the scope and coverage of current policies were prepared under ENRMP/GEF Project.
2. A DENR internal policy that will clarify, define, and specify the tasks, responsibilities, accountabilities, and authorities of the different ENR sub-sector units at the national, regional, provincial, and community levels as they individually plan and implement IEM-consistent activities in the priority watersheds. There might be a need for a focal IEM coordinator in each DENR region to ensure that there is integration of all ENR sub-sector activities in priority watershed from planning, implementation, M&E, and sharing of budgetary resources. This circular may also have to specify how each region, PENRO, CENRO, IEM regional coordinator, and IEM on-site coordinator will be evaluated as to their performance, outputs, working relationships and partnership with LGUs, civil society, and the private sector in their target watersheds. Performance evaluation may be based on how each region, unit, and staff has worked together in achieving the IEM outputs that contribute towards the IEM objectives. This policy area has already been incorporated or embedded in the final draft version of the DAO on IEM.
3. Although the policy on devolution (DAO 2010-07) has not been aggressively pursued since it was issued more than two years ago, it can be revised to state that the IEM strategy should be the launching pad for continuing/phased devolution of ENR functions to LGUs. Currently, the provisions of the Local Government Code of 1991, the joint memorandum circular (1998-01 and

2003-01) between DENR and DILG, and DAO 2010-07 have been providing guidelines for DENR's actions on devolution and partnership with the LGUs. The DENR-DILG JMC 2003-01 is being considered for revision especially on the preparation of FLUP and its incorporation in the LGU's CLUP and the co-management of forests and forestland between DENR and the LGUs.

The final draft DAO on IEM provides guidelines on how the concerned LGUs and the DENR could jointly approve and adopt the IEM framework that specify the non-negotiables (NNs) in the watershed-ecosystems especially for conservation areas, protection forests and forestlands, prime agricultural lands, high hazard zones, and disallowed uses and resource uses. The IEM framework may include solid and wastewater management, coastal and mangrove areas, mining, and land conversion as part of LGU and DENR strategies in the watershed-ecosystem. With LGUs preparing their IEM-consistent FLUPs/CLUPs as the basis of their zoning regime, the continuing/phased devolution of ENR functions to LGUs may hinge on how LGUs plan and implement ENR activities that support the IEM-consistent FLUP and CLUPs. LGUs that fall within two or more watersheds with NNs will simply have to reflect these in their FLUPs and CLUPs. These zones will also be covered by local ordinances and a memorandum of agreement between DENR and the LGU. The LGU's ENR development agenda will automatically be based on the NNs of each watershed-ecosystem that are found within the LGU's political jurisdiction.

4. A policy for adopting a results-based monitoring and evaluation (RBME) based on the IEM framework is also needed to ensure that DENR and the concerned LGUs assist or support the different Resource Management Units (RMUs). This policy will provide guidelines on how DENR and the LGUs have to follow a participatory process to jointly determine the relevant outcomes and outputs to be used to measure performance and implementation progress in the watershed-ecosystem. There will be outputs for each concerned DENR field unit and each concerned LGU in the watershed-ecosystem. The RBME of each watershed-ecosystem will be mainly based on the IEM framework, especially the NNs that are directly under the responsibility of DENR and the concerned LGUs.
5. A policy on sustainable financing will be needed to ensure that the adopted IEM frameworks are translated into actions and investments at the LGU and RMU levels. This policy (a Presidential Executive Order or Joint Memorandum Circular among concerned national government agencies) should incorporate the best practices and lessons from the ENRMP/GEF project and other projects on collaborative financing using public funds from national government agencies and LGUs, alternative financing mechanisms including PES schemes, and improving local governance to incentivize the private sector. It will also highlight the need to prepare individual annual investment or work plans that are in support of the IEM framework within their respective political jurisdictions or institutional mandate such as DENR, DA, DAR, DOR, and other agencies.

On the part of DENR, the policy on financing IEM will be linked with the M&E outcomes and outputs and prioritization of watersheds as the basis of the agency's PPAs and activities of different ENR sub-sectors. It will also provide guidelines on how the DENR region and the PENRO will allocate part of their PPAs on NGP to cover the coordination and management cost of the IEM governance body.

The need to address policy gaps at the national level will also mean the translation of the above policy areas at the local level through the resolutions of the IEM governance bodies and LGU ordinances or executive orders. This will ensure that the regulatory and policy support system is able to enforce rules throughout the IEM framework implementation with the local DENR and LGUs. The initial draft guidelines for local IEM governance framework at the ecosystem and LGU levels which were prepared under the ENRMP/GEF project will be helpful as reference.

6.0 Summary and Recommendations

The ENRMP/GEF pilot sites and several IEM-related projects have generated valuable lessons and guidance for replicating and scaling up the IEM strategy through the steps and processes. The assessment of the pilot IEM steps and processes has shown that more work is needed to deepen their effectiveness with only a few that could be scaled up efficiently. DENR has current and proposed regular and foreign-assisted projects such as the NGP, INREM, FMP, B+WISER and others that could be aligned in support of IEM pilots in the regions. These replication areas may adopt the ENRMP/GEF project guidelines for further refinements of their effectiveness, feasibility, simplicity, efficiency, replicability, and attractiveness with the LGUs and other local partners.

The initial IEM replication and scaling up efforts may start small while capacities, policies, support systems, budgetary processes, and other preparatory activities are underway. However, the suggested road map for replication and scaling up IEM highly recommends that DENR has to seriously address the following concerns to sustain initial momentum and trigger a self-initiating expansion system in the long term.

1. Designated units at the central, regional, and provincial DENR offices to plan and implement the IEM step or process.
2. Supply of adequately trained and available staff for replication and/or scaling up. The capacities of DENR and LGU staff are crucial for either replication and/or scaling up. Otherwise, the replications should be beefed up by engaging national and local experts.
3. Support systems for replication or scaling up such as policies, facilities, equipment, access to specialists and external expert advice, and training.
4. Linkages with local and national resource institutions that could be engaged to perform specific IEM tasks and activities such as mapping and geohazard assessments.
5. Governance body mechanism to periodically assess progress of replication or scaling up based on commonly agreed upon IEM outcomes and outputs.
6. Commitments at the LGU and DENR levels for funding support for the replication or scaling up

This report recommends that DENR adopt the supply-driven replication and scaling up strategy. DENR, in collaboration with other concerned agencies and local government units has to provide the necessary policy framework, technical assistance, capacity building, and guidance in IEM planning and implementation. In most watershed-ecosystems, the State has the largest stake with respect to IEM replication and scaling up. The State has the biggest investments in ENR-dependent facilities and public enterprises that support irrigation, energy generation, domestic water supply, ecotourism, and coastal and urban livelihoods. Moreover, the country needs to ensure ecological stability through effective conservation of highly diverse areas and habitats. It has to mitigate the increasing risks and damages from climate change-related natural and man-made calamities.

Lastly, it is highly recommended that a national and regional technical working groups for IEM replication and scaling up should be organized and mobilized to develop an action plan for mobilizing and establishing at least one IEM pilot per region. At the national level, TWG members should come from DENR Policy and Planning, FASPO, FMB, PAWB, EMB, and MGB. The TWG should be chaired by a senior official of the DENR Policy and Planning Office. The DENR Regional Executive Director should chair the TWG in each of the region.

References

Drucker, P. 2006. *Innovation and Entrepreneurship*. Harper and Collins. 288 p.

Drucker, P. 2003. *The Essentials of Drucker*. Harper and Collins. 368 p.

Development Practitioners Forum. 2012. www.devprac.org.

Gillespie, S. 2004. *Scaling up community-driven development: A synthesis of experience*. FNCD Discussion Paper. Washington, D.C.

Korten, D. 1980. *Community organization and rural development. A learning process approach*. *Public Administration Review*, Vol. 40, No. 5 (Sept-Oct 1980).

NIA. 2011. *Final list of watersheds supporting 140 river irrigation systems of NIA*. 2011.

World Bank. 2007. *Project Appraisal Document on a Proposed Loan in the Amount Of US\$50 Million and a Proposed Grant from the Global Environment Facility Trust Fund in the Amount Of Us\$7 Million to the Republic of the Philippines for A National Program Support To Environment And Natural Resources Management Project, East Asia*, World Bank.

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