

Integrated Coastal Management Process Sustainability Reference Book

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LIST OF ACRONYMS

AFMA	Agriculture and Fisheries Modernization Act
BFAR	Bureau of Fisheries and Aquatic Resources
CBFM	community-based forestry management
CEP	Coastal Environment Program
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CRM	coastal resource management
CRMP	Coastal Resource Management Project
DA	Department of Agriculture
DENR	Department of Environment and Natural Resources
DILG	Department of the Interior and Local Government
ECC	Environmental Compliance Certificate
EEZ	exclusive economic zone
EIS	environmental impact statement
ENRO	Environment and Natural Resources Office
FARMC	Fisheries and Aquatic Resources Management Council
GO	government organization
GT	gross ton
ICM	integrated coastal management
ICMSRP	Integrated Coastal Management Sustainability Research Project
LGC	Local Government Code
LGU	local government unit
M/CAO	municipal/city agricultural officer
M/CPDO	municipal/city planning and development officer
MOA	Memorandum of Agreement
MPA	marine protected area
NGO	nongovernment organization
PD	Presidential Decree
PNP	Philippine National Police
PO	people's organization
RA	Republic Act

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PREFACE

Background on the Integrated Coastal Management Sustainability Research Project

Considerable interest surrounds integrated coastal management (ICM) in tropical countries. It focuses on encouraging sustainable coastal resource use through an iterative process of regulation and policy development, institutional coordination and education. The ICM Sustainability Research Project (ICMSRP) is a three-year research project which studied, in a multidisciplinary manner, the sustainability of ICM processes in the Philippines and Indonesia following formal donor project termination. For the Philippine portion of the project, field research took place over two years (2001 and 2002) and involved 20 Filipino and American researchers and student assistants. Seven separate sites in Luzon and the Visayas were studied (Figure 1). The ICMSRP also assisted current ICM projects in the two countries and contributed to the development of educational materials and training workshops on ICM process sustainability within the involved institutions: School of Marine Affairs, University of Washington; Silliman University Marine Laboratory; Bogor Agricultural University; Coastal Resource Management Project (CRMP)-Philippines; and CRMP-Indonesia. For more information on this research, please contact Patrick Christie (patrickc@u.washington.edu).

Why an ICM Process Sustainability Reference Book?

The objective of this reference book is twofold. First, to supplement the ICM process sustainability training module, which was developed in conjunction with this reference book to assist ICM trainers facilitating workshops on ICM. Second, to serve as a stand-alone reference for practitioners during the design and management of ICM projects. Current ICM processes face several challenges that have the potential to be solved with prior preparation and planning. This publication invites project designers to improve the practice of ICM by developing processes and building institutions that will persist beyond formal project termination.



A patrol boat used by *Bantay Dagat* (sea patrol) officials in policing Philippine waters.

Nicole Milne

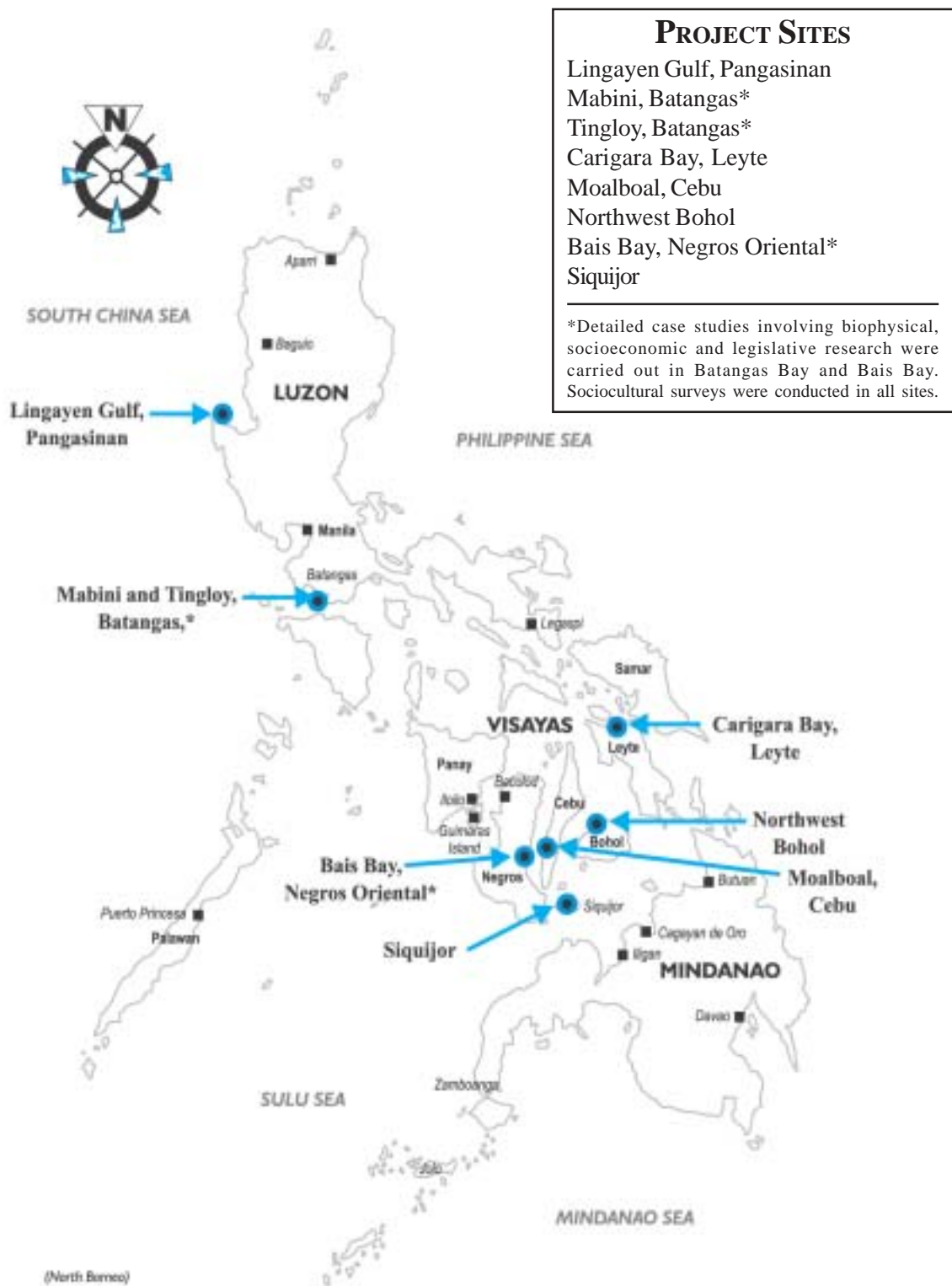


Figure 1. Integrated Coastal Management Sustainability Research Project study sites.

Who Should Use this Reference Book?

Specifically, it is targeted at middle to upper-level ICM managers, city/municipal planners, development officers, mayors, nongovernment organizations (NGOs), college students, national donors and others who work for ICM projects. Note that the target audience *does not* include coastal resource users, such as fishers. Many of the themes discussed here were identified during research on large ICM projects. However, this book may prove useful to community-based endeavors. Book users are strongly encouraged to adapt the scenarios presented to their specific context and needs. While this book touches on many issues that undermine ICM process sustainability, every user will be able to contribute knowledge from his or her personal experiences. Space is provided for this.

How is this Book Organized?

This book was designed for use during both the early planning stages and later management phases of ICM activities. It begins with two fictitious, but realistic, case studies that illustrate various problems confronting coastal communities in Southeast Asia. Drawing on the experiences of ICMSRP participants and researchers, the book includes detailed descriptions of several primary themes that emerged from the research and were found to affect the sustainability of ICM processes. The themes are arranged based upon the ICM planning process adapted from the Philippine Department of Environment and Natural Resources. Each primary theme (e.g., resources for management) contains several secondary themes (i.e., the need for resources at the local level, effective law enforcement, etc.) that detail further the ICMSRP's findings. Each secondary theme is accompanied by a descriptive paragraph and provocative questions, derived from the research, which are intended to spur discussion regarding the design and management of activities relevant to ICM process sustainability. This question format was employed since it is clear that developing general prescriptions intended to work in all locations is not possible. Rather, ICM practitioners and project designers (including coastal community members) should work to answer these questions considering local conditions.

Many issues affect ICM process sustainability. Only major themes discovered by field researchers are explored here. Users should add their own themes in the space provided at the end of the book. References are included to papers written by ICMSRP researchers to explore specific topics in greater depth.

I. INTRODUCTION:

INTEGRATED COASTAL MANAGEMENT AND PROCESS SUSTAINABILITY

WHAT IS INTEGRATED COASTAL MANAGEMENT?

One definition, among many, is the following:

Integrated coastal management (ICM) is a continuous and dynamic process that requires the active and sustained involvement of the interested public and the many stakeholders with interests in how coastal resources are allocated and conflicts are mediated. The ICM process provides a means by which concerns at local, regional and national levels are discussed and future directions are negotiated (GESAMP 1996).

THE ICM PLANNING PROCESS

The ICM planning process, as identified by the Coastal Resource Management Project of the Philippine Department of Environment and Natural Resources, consists of five phases (Figure 2). As an iterative process, this planning cycle is periodically refined and revised as new information is obtained or conditions change. This book details management themes that have derailed ICM activities in the Philippines at each phase in the planning cycle. While some themes identified in this book affect specific phases, other themes can cause problems throughout the cycle if they are not remedied once encountered.

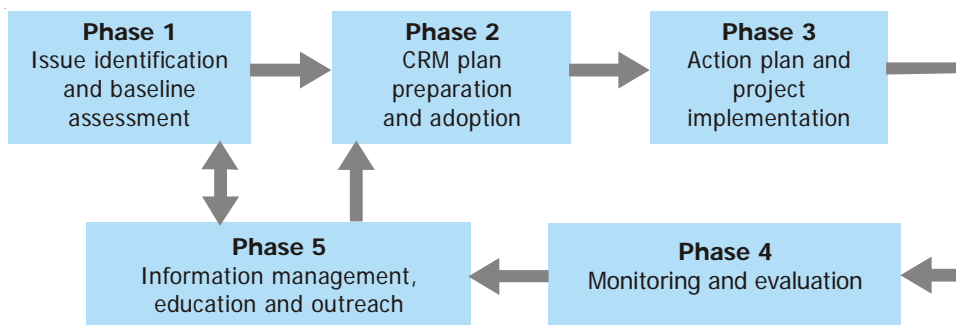


Figure 2. The ICM planning process for Philippine local government (adapted from DENR *et al.* 2001a).

Each phase of the ICM planning process is associated with specific activities (Table 1). For example, phase 1 involves: program preparation, secondary information gathering, field assessment, database and profile development, prioritization of issues and analysis of causes.

This book illustrates how each phase of the planning process can be derailed; for example, phase 2 could potentially be derailed due to lack of resources for management and weak stakeholder commitment. By relating the ICM Sustainability Research Project findings to the planning process, ICM practitioners will become aware of the derailing factors most likely to affect each phase. Thus, they can take steps to account for these factors when designing ICM projects.

Table 1. Activities associated with each phase of the ICM planning process (adapted from DENR *et al.* 2001c).

Phase	Activities
1. Issue identification and baseline assessment	Program preparation Secondary information gathering Field assessment/participatory coastal resource assessment Database and profile development Prioritization of issues and analysis of causes
2. ICM plan preparation and adoption	Establishment of management bodies Definition of goals and objectives Development of ICM strategies and action plan
3. Action plan and project implementation	ICM plan implementation Legislation and regulation Coastal law enforcement Revenue generation Annual program preparation and budgeting
4. Monitoring and evaluation	Monitoring and evaluation Refinement of management plan
5. Information management, education and outreach	Information management Education, information and communication

WHAT IS ICM PROCESS SUSTAINABILITY?

ICM process sustainability is the ability of ICM institutions, policies, activities and practitioners to support coastal and marine resource use and conservation goals beyond external project support. ICM processes are sustainable to the extent in which they contribute to the development of a pattern of self-sustaining behaviors that leads to the continual practice of ICM. Note that ICM projects have, by definition, a phaseout date when external resources such as funds and advisors are withdrawn (Figure 3). The goal of these projects is to initiate a sustained planning process that continues indefinitely. This book is concerned with how to design ICM *projects* to improve the ICM *process*.

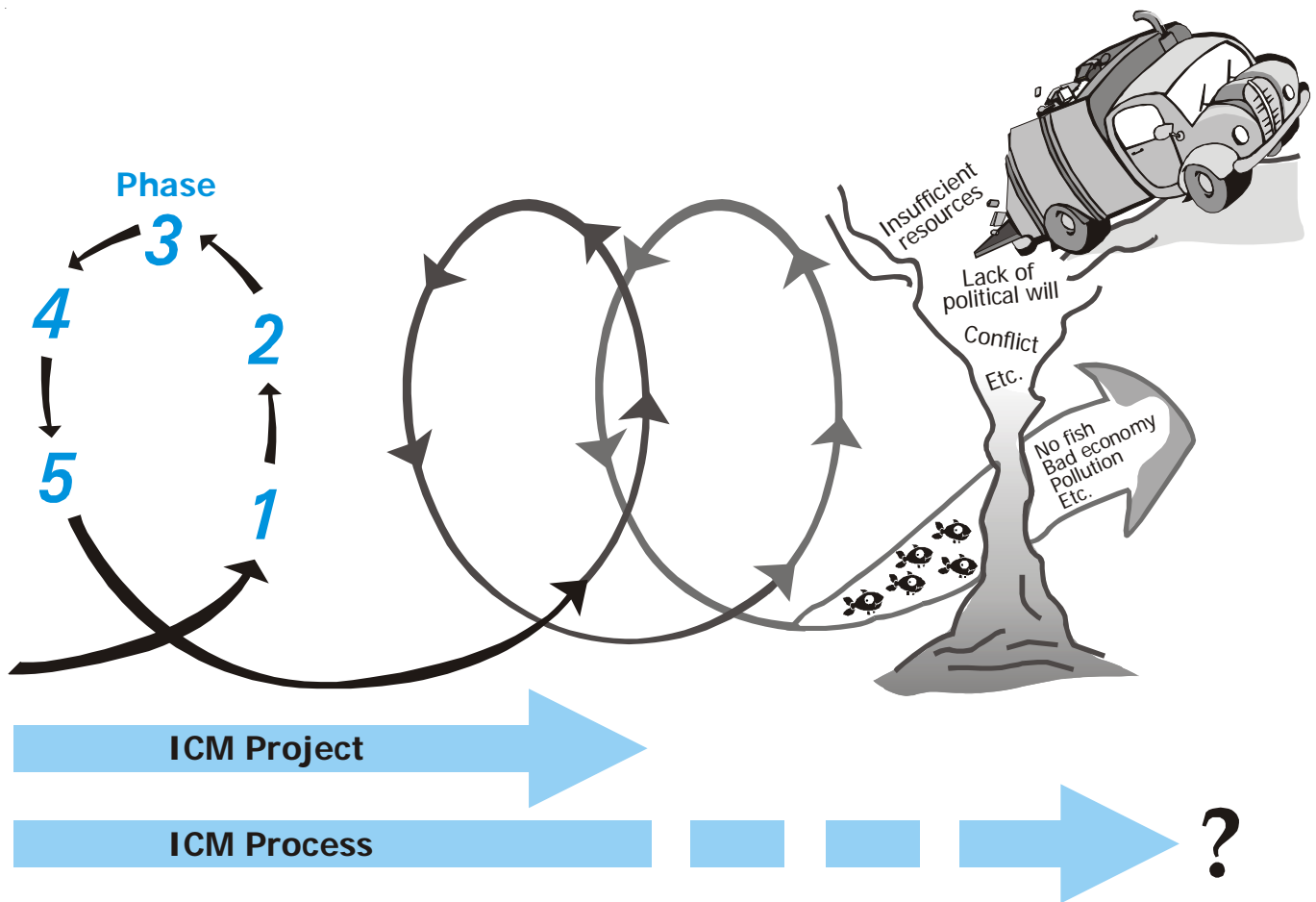


Figure 3. ICM projects have phaseout dates but the ICM process hopefully continues indefinitely. Derailing factors (e.g., insufficient resources, community or organizational conflict, lack of political will, etc.) threaten the ICM process at all phases. These factors should be anticipated and planned for early in the process.

CHARACTERISTICS OF A SUSTAINABLE ICM PROCESS

A sustainable ICM process, based on published literature, should have the following characteristics:

1. ongoing, adaptive planning processes based on self and external evaluation;
2. widespread and continual stakeholder participation;
3. stable financial backing, if necessary, beyond the termination of temporary project support;
4. ongoing support from leaders at various levels (national, municipal, community);
5. ongoing institutional support at various levels;

6. policies founded on firm legal grounds;
7. ongoing monitoring and evaluation of social and environmental conditions; and
8. tangible actions (such as the creation of marine protected areas [MPAs], reforestation or water quality management) that result in improved environmental, economic and social conditions.

WHY IS ICM SUSTAINABILITY IMPORTANT?

Present patterns of coastal resource use around the world threaten the viability of many marine ecosystems. Reliant upon these resources for food security and income generation, many coastal communities are facing serious problems (Figures 4 and 5). In the Philippines, for example, the importance of fisheries to food security cannot be overstated. Fish provide approximately 50% of the country's animal protein (Courtney *et al.* 1998). In rural communities, up to 80% of the animal protein may be supplied by fish caught in municipal waters (Savina and White 1986).

The aim of the ICM process is to help societies realign their use of coastal resources so that ecosystems remain productive and viable for future generations. Ensuring the sustainability of the ICM process, threatened by a multitude of factors operating at various scales, is critical to achieving ambitious goals. One example of a factor that threatens ICM process sustainability concerns MPAs; for example, the rate of failure for MPAs in the Philippines is approaching 90% (White *et al.* 2002). Moreover, in tropical countries, where hundreds of millions of dollars have been spent on coastal management (Olsen and Christie 2000) there is rising skepticism concerning the ability of many of these projects to curb environmental degradation. The end consequence is that people will lose trust in any sort of planning process if benefits (i.e., economic, environmental, social, etc.) do not materialize from these efforts. Therefore, it is critical that future ICM efforts build elements of sustainability into their projects to avoid ICM process failure upon formal project termination.

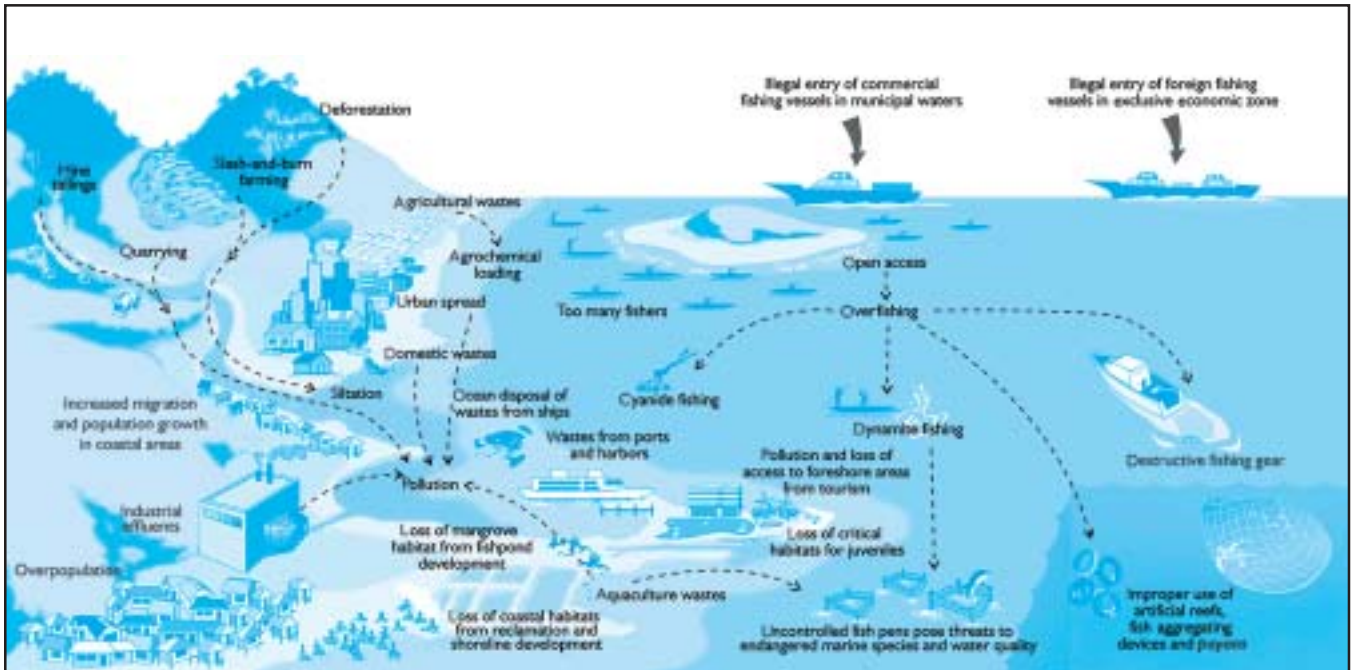


Figure 4. Various economic activities and their impacts on the coastal environment.

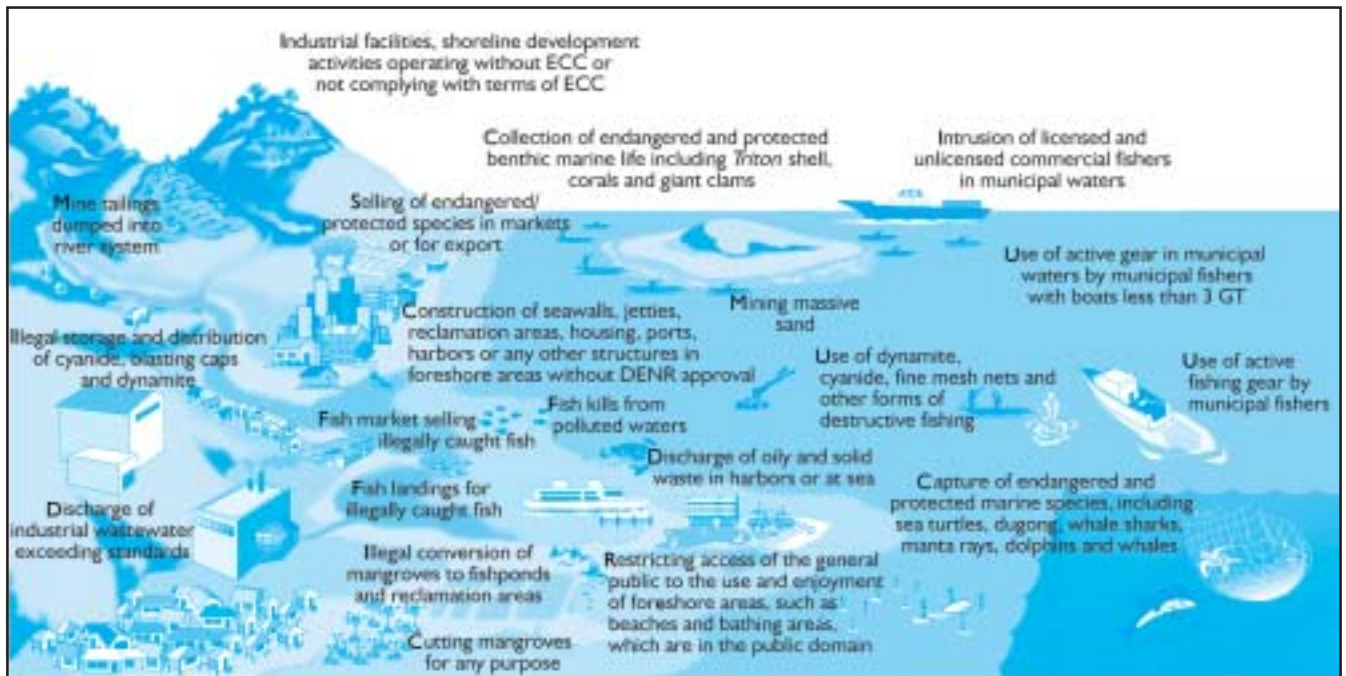


Figure 5. Illegal activities common in the Philippine coastal environment.

II. CASE STUDIES:

COMMUNITIES RUPING AND NITANG

The following scenarios portray pressing coastal management issues in the Philippine archipelago. They are drawn from real-world experiences, but the names of specific areas have been changed.

COMMUNITY RUPING

Ruping, a relatively small community on a large bay in the Philippines, struggles with coastal resource management (CRM). Surrounded by larger and wealthier communities, Ruping shares responsibility for the management and wise use of resources within the bay. The bay has long been an important source of food for local populations and neighboring towns on the island. A large mangrove forest surrounds the bay; the forest is used for shellfish collecting and is threatened by tree cutting.

Several parties have been involved with coastal management within the last several years, including nongovernment organizations (NGOs), academic institutions and foreign-assisted integrated coastal management (ICM) projects. Some major achievements in ICM in Ruping include: well-developed coastal environmental profiles aiding ICM plans; successful alternative livelihood projects such as seaweed farming; and increases in tourism due to better protection of local coastal resources. Mangrove forests are being reforested and protected. However, siltation, resulting from upland deforestation and poorly planned development on land, threatens the health of nearby coral reefs and species that depend upon them.

Several factors threaten the sustainability of Ruping's coastal and marine resource management processes. These include: insufficient management capabilities of local government units (LGUs are municipal governments in the Philippines), lack of coordination between neighboring communities, insufficient resources for ICM planning and implementation, changing commitment of government officials due to turnover in political administrations, and insufficient accountability mechanisms among project managers, sponsors and community residents.

Authority over coastal management has been decentralized to the LGU in the area, providing it with sufficient legal authority to carry out coastal management activities

(Santiago 2002). For ICM initiatives to be carried out effectively, local officials must jointly agree on policy goals. They need sufficient human resources and financial support. Complete and legitimate ICM laws also are needed. Lack of agreement on policy goals and poor implementation capabilities are two factors that have derailed ICM efforts in the community. Rumors of corruption and inefficiency also challenge the legitimacy of the LGU.

After the LGU assumed control of ICM activities, it became apparent that it alone was incapable of sustaining the ICM process due to insufficient technical and managerial resources. In particular, the LGU of Ruping maintains that it lacks resources for *Bantay Dagat*, the local sea patrol. A long-standing quarrel between LGU officials in Ruping and neighboring communities over a valuable strip of coastal land has been another barrier to successful ICM. The absence of conflict resolution mechanisms and external support agencies to foster cooperation further hinders ICM efforts.

Political turnover poses another challenge to long-term ICM efforts. When mayoral terms end and new officials are elected, knowledge of and commitment to ICM changes. In Ruping, the new municipal administration has decided to ignore ICM. Additionally, investments in training the preceding administration were to some degree lost when trained personnel were replaced by the current administration. Clearly, when LGUs have a monopoly over ICM activities, the sustainability of an ICM process is vulnerable to local political shifts.

The lack of accountability between project implementers and Ruping residents has been another ongoing obstacle to ICM sustainability. Currently, local government officials are more accountable to private interests than to local resource users, in large part because private interests typically assist officials in securing their positions. Furthermore, the commitment of the mayor, who is the primary decisionmaker for the LGU, dramatically influences the capacity of other government officials who wish to support ICM initiatives. In Ruping, the absence of a unified vision for ICM on the part of local government officials is an important factor derailing ICM initiatives.



Patrick Christie

Fishers, such as this man, earn additional income by weaving *bobos* or traditional fish traps.

COMMUNITY NITANG

Bordering a large bay, Nitang is one of several coastal communities in the Philippines involved in ICM efforts to safeguard coastal and marine resources. Dynamite fishing in the area has been minimized, but other destructive fishing techniques coupled with an ever-increasing coastal population threaten the remaining natural resources. Resource users and LGUs in the area have been quite active in coastal management, creating marine sanctuaries, participating in alternative livelihood projects and working in the booming tourism industry. The condition of many coastal and marine resources has dramatically improved due to increased enforcement and improved management; the coral reefs and fish populations in the area have either stabilized or improved since 1993. The combination of coastal management with alternative livelihood projects has become increasingly popular with Nitang residents, as they supplement income and reduce pressure on resources.

The tourism sector in the area has increased over the last several years, with numerous scuba diving tourists visiting the area for its brilliant coral reef ecosystems. Consequently, many resort owners see value in protecting these unique underwater habitats and are actively involved in ICM activities. These resorts currently share responsibility with *Bantay Dagat* for enforcing coastal management laws in municipal waters. As a result many destructive fishing practices have been curbed.

Despite the advances in coastal management, particular dynamics and conditions threaten the sustainable management of coastal and marine resources in Nitang. These include: lack of long-term commitment to ICM by local community leaders, businesses and officials; absence of financing mechanisms for ICM; alienation of some resource users by ICM practitioners; inadequate accountability mechanisms among involved stakeholders; conflict over control of and access to resources; inequitable distribution of economic benefits; and inadequate enforcement of ICM legislation.

Though the LGU in Nitang continues to play a prominent role in supporting and managing ICM activities, the community has witnessed the distribution of many public sector tasks to NGOs, private institutions, and businesses such as local resorts. National and international NGOs concerned with ICM have developed strong ties to the area, while working on a broad spectrum of activities including community empowerment, organizing private businesses and creating public-private partnerships. Lacking long-term commitment to the area, several of these actors have failed to foster necessary commitment from community residents. This threatens to derail existing ICM activities. Additionally, several of these actors have failed to establish financing mechanisms needed to sustain ICM activities that were dependent on outside financing.

Internal tensions and unequal power relationships between ICM practitioners and resource users, and the absence of accountability mechanisms to prevent the monopolization of decisionmaking by stakeholder groups have hindered effective coastal management in Nitang. The increased involvement of resort owners in monitoring and enforcement of marine sanctuaries has displaced some local resource users by limiting access to marine resources. Many fishers feel that existing ICM initiatives serve the interests of the resorts and dive shop owners and not those of community residents. They feel that the sanctuaries mainly benefit resort owners. The absence of a check and balance system to ensure accountability and reduce conflict among coastal zone stakeholders has severely hampered the ICM process.

Deficiencies in coastal law enforcement also threaten to derail the ICM process. These include a lack of incentives to encourage compliance with ICM laws, trained coastal law enforcement units and resources for enforcement as well as a slow justice system. Additional financial and legislative support for *Bantay Dagat* members is needed to improve law enforcement in the bay.

III. FINDINGS OF THE ICM SUSTAINABILITY RESEARCH PROJECT

Following two years of extensive fieldwork in the Philippines, the Integrated Coastal Management Sustainability Research Project (ICMSRP) identified a number of factors that threaten the sustainability of integrated coastal management processes. Each factor is presented in this book as a secondary theme that belongs to a broader category (primary theme) illustrating a potential deficiency in the ICM process. The ICM planning process diagram (Figure 2), adapted from DENR (2001a), was used to organize the themes. Each theme can be more fully understood by considering the contextual situation in which it occurs. Themes were grouped under the most appropriate ICM planning phase. However, each primary theme and the accompanying secondary themes, may be associated with multiple phases. Challenging questions related to ICM sustainability follow the description of each secondary theme. These questions are intended to stimulate discussion among ICM practitioners responsible for designing and managing projects.

PHASE 1: ISSUE IDENTIFICATION AND BASELINE ASSESSMENT

- ◆ Program preparation
- ◆ Secondary information gathering
- ◆ Field assessment/participatory coastal resource assessment
- ◆ Database and profile development
- ◆ Prioritization of issues and analysis of causes

Primary theme: The use of biophysical and social data

- *Secondary theme: Using biophysical and social data as proactive tools rather than reactive tools*



Alan White

Coral reef monitoring using a line-intercept transect method provides baseline information to monitor changes in live coral over time.

Context:

The current use of biophysical and social data tends to be more reactive than proactive in nature. Data are often used to respond to problems arising with coastal zone development activities, rather than to inform the proactive development of ICM. The granting of a mayor's permit followed by the use of the Environmental Impact Statement System illustrates the reactive use of relevant data (Figure 6). Currently, the granting of permits by local government units (LGUs) to development projects is not tied to the Environmental

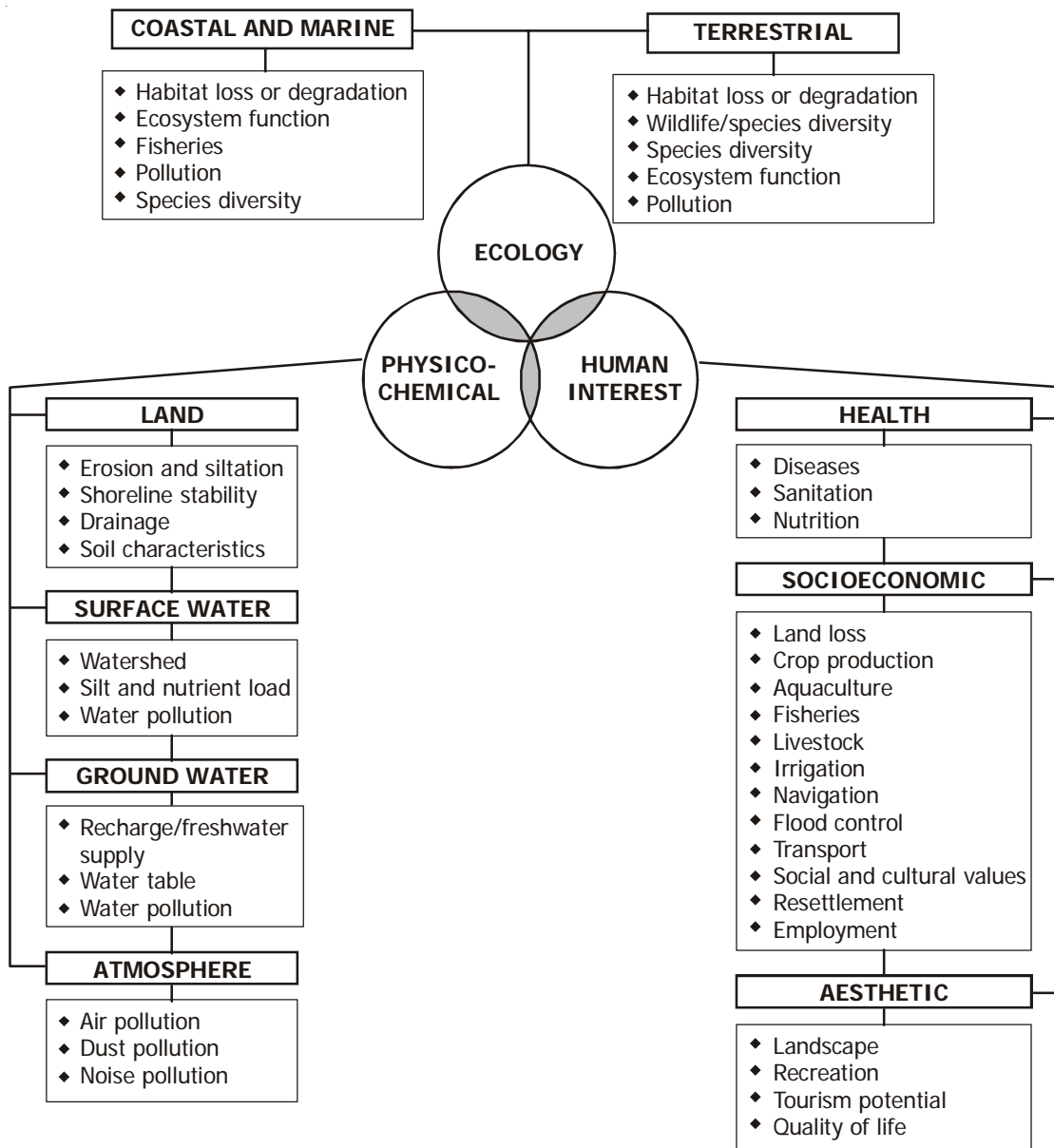


Figure 6. Types of impacts that should be considered in environmental impact assessment (modified from Clark 1996).

Compliance Certificate (ECC) requirement of the Department of Environment and Natural Resources (DENR) through the above system (Presidential Decree 1586). Therefore, if stakeholders do not question a development project, a mayor's permit is granted giving developers the nod to move forward with construction.

Challenging Questions for ICM Design:

1. What environmental monitoring process is required by LGU prior to development within the coastal zone?
2. What mechanisms are in place to ensure the use of available biophysical and social data prior to development in the coastal zone?
3. How do you compel coastal development projects to be backed with an ECC?
4. In what instances would it be unnecessary to use biophysical and social data in the ICM project decisionmaking process?



Toni Parras

Conducting socioeconomic interviews provides data on income, family situation and resource use, and facilitates the community organizer's integration into the community.

- ***Secondary theme: ICM decisions based on political whims rather than biophysical and social data***

Context:

Even when biophysical and social data are available, coastal management decisions are not always based on this information, but rather on the political interest of the current administration. This is a serious threat to ICM process. In this situation, there is an increased tendency for people to become disheartened with ICM process. In municipalities that make ICM a priority, biophysical and social data sets are readily used as part of the planning process. Where ICM is less of a priority, however, practitioners need to advocate for more informed decisionmaking by LGUs.

Challenging Questions for ICM Design:

1. What decisions are being made in your area based on biophysical and social data?
2. What are the incentives for LGUs to make data-based decisions?
3. What causes the non-implementation of well-documented plans?
4. What can be done to ensure that the current administration uses available biophysical and social data in the decisionmaking process?

For more information on the use of biophysical and social data, see DENR *et al.* (2001c); Christie *et al.* (2003); and Olsen de Leon (2003).

PHASE 2: ICM PLAN PREPARATION AND ADOPTION

- ♦ Establishment of management bodies
- ♦ Definition of goals and objectives
- ♦ Development of ICM strategies and action plan

Primary theme: Resources for management

➤ *Secondary theme: Need for resource acquisition priorities*

Context:

Most local governments have not identified resource acquisition priorities. Local coastal management is likely to require some new personnel and equipment, but until local officials identify their critical resource management needs (i.e., personnel training, technical supplies, etc.) coastal management efforts will not move forward. This typically occurs because either the LGU does not value ICM or it does not know what kind of personnel and equipment are needed to make ICM work.

Challenging Questions for ICM Design:

1. What do local officials identify as critical coastal resource management (CRM) needs?
2. What attempts are being made to train LGU on the: (1) importance of ICM and (2) elements required to initiate and sustain an ICM process?



Maria Fe Portigo

A community participating in setting a common vision and in identifying goals and objectives using the workshop format.

➤ *Secondary theme: Need for resources for ICM at the local level*

Context:

Concentrating authority over ICM activities in individual institutions (i.e., LGUs, nongovernment organizations [NGOs], etc.) can deprive projects of necessary resources if the institution does not prioritize ICM. In this situation, it may be necessary for LGU, NGO or other institutions to: (1) seek appropriate training or (2) share ICM responsibilities with additional institutions capable of providing the needed resources.

Challenging Questions for ICM Design:

1. Is there a mechanism to strengthen institutional capabilities to supply the needed technical and managerial resources?
2. Are there mechanisms in place that would allow for increased inter-organizational coordination? For example, transparent processes, collective decisionmaking, or a means by which institutions could coordinate and strengthen their ICM activities?

➤ Secondary theme: Resources needed for effective law enforcement

Context:

National and local agencies, such as the Philippine National Police (PNP) and *Bantay Dagat*, lack key management equipment and trained personnel to effectively enforce coastal management laws. Enforcement is weak due to: slow justice system, lack of incentives encouraging people to obey laws, lack of trained enforcement units and patrol assets (e.g., patrol boats, fuel, flashlights, etc.). Also, the multitude of rules and regulations for coastal resource users makes it difficult for enforcement officials to know and administer all these effectively. In sum, the combination of insufficient training and a large patrol area makes it extremely difficult for coastal law enforcement units to do their jobs.

Challenging Questions for ICM Design:

1. What powers, if any, are given to enforcement units to prosecute ICM related cases?
2. Are there educational mechanisms in place for enforcement units to learn about ICM regulations? If there are, describe these. Otherwise, discuss what is needed.
3. Do the officers have a good understanding of their roles and jurisdiction? Do these overlap or conflict with the roles of other people or agencies? How do they overlap, and what mechanisms are in place to mediate potential conflicts?
4. Do enforcement officials have necessary resources?



Elpidio de la Victoria

Public display of disapproval by local government officials and law enforcement agencies of illegal fishing activities sends a strong message that deters possible violators of the law.

Primary theme: Commitment

➤ *Secondary theme: Dwindling commitment following administrative turnovers*

Context:

The level of knowledge and degree of commitment to the ICM process changes with turnovers in political administrations. Typically, one of two things happens. The newly elected officials assume responsibility for ongoing ICM initiatives and activities continue uninterrupted. Or, new officials lack understanding or interest in ICM activities, and existing initiatives are discontinued. Efforts to train staff are to some degree wasted if they are replaced every time an administration is changed.

Challenging Questions for ICM Design:

1. What mechanisms are in place to ensure sustained support (e.g., financial, technical, managerial, public, etc.) of ICM projects prior to political turnover?
2. What mechanisms are in place to encourage long-term commitment by public officials who remain following mayoral elections?
3. Are permanent staff, not subject to turnover, involved in the ICM process?
4. Are mechanisms in place to train incoming administrations in ICM? If not, what type of training is needed? What resources will this require?

➤ *Secondary theme: Encouraging commitment by implementing officials*

Context:

When a person or institution has complete control over ICM activities, the commitment to ICM is largely dependent on personal motives of the one in power. In this context, the personal commitment of LGU officials is necessary for ICM sustainability. Often the mayor is considered to be the most important decisionmaker in ICM. However, the posts of the municipal agricultural officer (MAO) and the municipal or city planning and development officer (M/CPDO) are permanent ones that directly influence ICM decisions. Without mayoral support, even the most committed MAO or M/CPDO will be largely ineffective. Commitment by MAO, M/CPDO, *and* mayor are all-important in implementing and sustaining ICM processes.

Commitment is often encouraged by private institutions and influences the extent of the support that these decisionmakers have for ICM initiatives. If these private institutions are present and supportive of ICM, the influence is positive. Conversely, when they are not actively involved with ICM projects in the area, the commitment of those in power depends solely on personal motives.

Challenging Questions for ICM Design:

1. What is the nature of commitment by mayors and other public officials to the ICM process? Is it reliant on external support or personal commitment?
2. What institutions influence the commitment or decisionmaking of government officials? How do these institutions influence them? What is the nature of the institutions' commitment?
3. What mechanisms are in place that will increase communication and commitment among mayors, MAOs, M/CPDOs and other government officials?

➤ *Secondary theme: Conflicting worldviews*

Context:

Stakeholder groups in the coastal zone have conflicting motivations for participating in the ICM process (e.g., higher fish catch, increased biodiversity, etc.). Often, this mismatch in motivations causes participants to withdraw from the ICM process due to conflicting interests or expectations that others will continue the work. Importantly, each stakeholder group (fishers, tourism brokers, ICM practitioners) tends to have distinct worldviews. Their perceptions on the importance of environmental protection differ. For example, professional ICM practitioners and tourism brokers are concerned with issues of biodiversity, aesthetics and other traditional environmental agendas. Fishers are concerned with environmental conditions that result in higher fish catches and improved family economics. If not acknowledged and planned for, such differences may lead to conflict and stakeholder withdrawal from ICM activities. This is especially true when values of a particular group dominate the ICM process and prevent other stakeholder groups from participating effectively.

Challenging Questions for ICM Design:

1. What are the motives of ICM practitioners, community members and other involved stakeholders? Are these clearly stated, understood and shared (if possible)?
2. What are the impacts that an ICM project strives to achieve, or the assets it plans to build, in order to motivate stakeholder commitment to the ICM process?
3. Are there multiple ICM activities planned to encourage the participation of stakeholders with various motives and levels of commitment to ICM activities?

➤ *Secondary theme: Creating incentives for local management*

Context:

There is a need to create incentives to encourage improved local management. The Local Government Code and the Fisheries Act, in particular, increase the scope of local government authority without providing many incentives for assuming greater responsibility. An example of one such incentive would be to provide priority funding to LGUs and supporting organizations that develop well-thought out ICM plans (DENR, n.d.).

Challenging Questions for ICM Design:

1. What incentives are in place or are being considered to encourage local governments to develop and adopt effective ICM programs?
2. What practical steps have national agencies taken to encourage effective local programs?
3. How much local political support is there for ICM?
4. Are central government agencies required to support LGUs implementing ICM?

➤ *Secondary theme: Biophysical impacts linked to ICM commitment*

Context:

Concern over declining environmental conditions, coupled with perceived and realized improvements in the biophysical environment due to ICM, encourages the continuity of ICM processes. Stakeholder commitment to the ICM process is influenced by an individual's concern for the condition of the biophysical environment. In general, research results have confirmed that environmental conditions at several sites in the Philippines have improved through ICM. These improvements are appreciated by many coastal community members and project participants. Understandably, challenges such as impacts from trash, coastal zone development and upland agricultural practices remain.

In areas where stakeholders are encouraged by improvements in the biophysical environment, the momentum behind ICM efforts is strong and there is an increased likelihood that ICM processes will be sustained. Yet the link between environmental conditions and personal commitment to ICM is surprisingly complex. The link is influenced by an individual's social standing, employment and worldviews. In other words, the relationship between environmental conditions and ICM sustainability is not a direct one. Whether people are motivated to continue ICM practices out of concern for the future or out of a sense of accomplishment and inspiration is unclear and probably depends on the individual. Nonetheless, real and perceived environmental crises have encouraged stakeholder support in ICM activities such as marine protected areas (MPAs), seaweed farming, aquaculture, and coastal and marine tourism.

Challenging Questions for ICM Design:

1. What are the desired improvements in the biophysical environment that ICM activities hope to achieve?
2. Is there an established biophysical monitoring program to measure project impacts and environmental changes? If there is, describe the program. Otherwise, what resources are needed to establish such a program?
3. Have improvements in the biophysical marine environment been realized? If yes, describe them. If not, give some possible explanations for lack of improvements?
4. Are changes in the biophysical environment presented to stakeholders and the general public to encourage commitment and enthusiasm for ICM activities? If so, describe how the public is informed and whether or not you believe this has influenced the success of the ICM process. If environmental changes are presented to the public, what resources would be required to do this?
5. Are environmental impacts monitored? Are the results of monitoring shared with stakeholders? Are management plans altered based on environmental impacts?
6. Are there improvements in the environment as a result of ICM?

➤ *Secondary theme: Encouraging long-term commitment from short-term ICM participants*

Context:

Outside actors, such as technical advisers, field workers and donors, play a significant role in designing and implementing ICM activities. However, they often do not have a long-term commitment to the area. It is important for long-term sustainability that these outside actors inspire commitment in the individuals and institutions that will remain in the area. Outside actors have the potential to influence this commitment.

Challenging Questions for ICM Design:

1. Are there incentives that encourage commitment from ICM practitioners and implementing officials?
2. Are there constraints that discourage commitment from ICM practitioners and implementing officials?
3. Do resource users sense that outside actors are committed to the process? If not, how can this be addressed?
4. What strategies are used to encourage commitment from those involved in ICM activities following project termination?

For more information on management resources and commitment, see: DENR *et al.* (2001b, 2001d, 2001h); Christie *et al.* (2003); Lowry *et al.* (2003); Olsen de Leon (2003); and Sievanen (2003).

PHASE 3: ACTION PLAN AND PROJECT IMPLEMENTATION

- ◆ ICM plan implementation
- ◆ Legislation and regulation
- ◆ Coastal law enforcement
- ◆ Revenue generation
- ◆ Annual program preparation and budgeting

Primary theme: Economic incentives

➤ **Secondary theme: Generating economic benefits**

Context:

Sometimes there is a lack of perceived economic benefits from ICM projects on behalf of both participants and nonparticipants in ICM activities. Therefore, alternative livelihood projects, instituting livelihoods that do not rely mainly on marine and coastal natural resources, have been developed to increase the individuals' monetary benefits. Combining resource management (e.g., marine sanctuaries, artificial reefs, enforcement, etc.) with alternative livelihoods that raise income is becoming increasingly popular within ICM activities as they provide income and reduce pressure on resources. For example, seaweed farming has been well received by some resource users and has provided an income source for coastal inhabitants. ICM initiatives that pursue strategies solely to improve environmental conditions will likely fail. To be sustainable, project activities must raise the income of participants.

Challenging Questions for ICM Design:

1. Does the ICM project combine resource management with alternative livelihood activities that are designed to raise income? Examples of alternative livelihood activities include: coastal and marine tourism, seaweed farming, aquaculture, business ventures, etc.
2. Do alternative livelihood projects have proper management, transparent processes and accountability embedded within their operation?



Small-scale farming of edible seaweed, such as *Caulerpa*, is a source of income for coastal communities.

Alan White

➤ ***Secondary theme: Unequal distribution of economic benefits***

Context:

Economic benefits are not always distributed equitably during project implementation. If these motivate people to support a project, then these must be enjoyed equitably. To do this, the creation of mechanisms is required to ensure checks and balance in project operation. For example, the benefits from ICM activities should, when possible, be publicly known. One stakeholder group should not monopolize benefits.

Challenging Questions for ICM Design:

1. Is there a check and balance system established to ensure the equitable distribution of economic benefits to the actors involved in the ICM process? For example, local fishers and tourist brokers jointly plan ICM activities and distribution of benefits.
2. What does this check and balance system consist of? Who oversees the system?

Primary theme: Financing mechanisms

➤ ***Secondary theme: Lack of long-term financing mechanisms***

Context:

In the design of ICM activities, project designers may fail to establish long-term financing mechanisms that persist beyond formal project termination. If the ICM process is dependent on expensive external agents and technologies, then it may be difficult to sustain necessary levels of financial and technical inputs after a project ends.

Challenging Questions for ICM Design:

1. What types of funding mechanisms have been designed that will persist beyond the termination of the project?
2. Can these financing mechanisms be realistically achieved?

➤ ***Secondary theme: Revenue-generating strategies within LGUs***

Context:

Many LGUs lack a revenue-generating strategy for ICM. They could augment national tax revenues with other sources, such as user fees for entrance to protected areas, fishing licenses and permits for use of marine waters or shoreline areas (see DENR *et al.* 2001c for more strategies). Although it is common knowledge that these revenues are possible and legal, the mechanisms to collect and manage funds are not usually in place and are being tested by only a few LGUs in the Philippines.

Challenging Questions for ICM Design:

1. What are the primary LGU expenditures for ICM?
2. How are revenues allocated to ICM activities?
3. How are LGU budgets for ICM changing over time? Is this in accordance with what is needed to sustain ICM efforts? If not, how should it change to meet ICM needs?
4. What is the LGU experience in imposing taxes and fees for use of municipal waters?



Patrick Christie

LGUs have the ability to generate revenues by licensing fishing and other coastal and marine activities.

Primary theme: Conflict

- *Secondary theme: Conflict over access to resources*

Context:

Where marine sanctuaries have been established, resource users' access to coastal and marine resources may have declined. This has caused conflict between local resource users (e.g., fishers) and those managing marine sanctuaries. In some areas, it has become a common thinking of local fishers that marine sanctuaries are protected for the advantage of those directly involved in tourism industry. Consequently, many local fishers feel they have been denied their source of livelihood, especially those who do not have sophisticated fishing equipment and who only fish near shore. Those who are marginalized must be genuinely represented in decisionmaking processes especially in resource allocation decisions.

Challenging Questions for ICM Design:

1. Who is benefiting from the MPA or ICM project?
2. Are all stakeholders involved in the planning, citing and management of MPAs (Figure 7)?
3. How do you ensure "downward" accountability from those with more influence to others in less influential groups?
4. Does the project have conflict resolution mechanisms to abate concerns and confusion among involved stakeholders (Figure 8)?

➤ **Secondary theme: Insufficient stakeholder involvement in the design and management of MPAs**

Context:

When initiating and developing a MPA, the identification of stakeholders, both inside and outside the community, must be an ongoing process. The participation of stakeholders, including those not involved in creating MPAs, should be encouraged and sustained. Often, marine sanctuaries are designed and managed with little consideration and input from community members. As a result, the direct benefits of MPAs tend to concentrate in the hands of a few. It is important to involve all stakeholders in MPA development because research has shown that those directly affected by a MPA largely determine its failure or success.

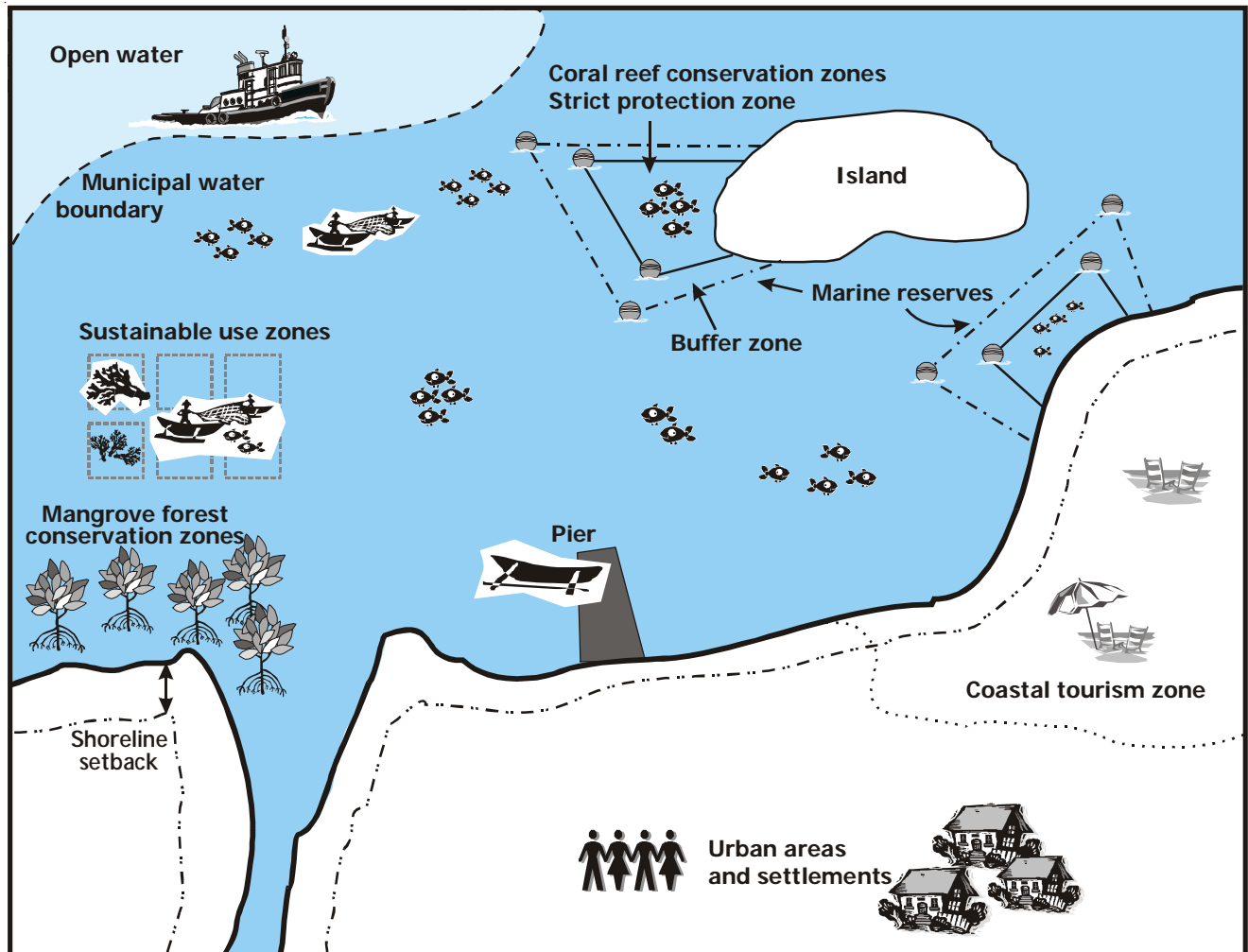


Figure 7. Stakeholders should be included in the planning process for multi-use areas.



One-on-one conciliation



Conciliation through representation



Arbitration by third party

Figure 8. Methods of conflict management (modified after SMISLE 1999).

Challenging Questions for ICM Design:

1. Who are the stakeholders, inside and outside the community, affected by the designation of a MPA (Figure 9)?
2. What are the objectives of the MPA? How are these presented and discussed with the involved stakeholders to ensure social acceptability?
3. Describe the mechanisms in place to ensure that questions and concerns from all stakeholders are heard and addressed. How are diverging interests of various stakeholders negotiated and accommodated?



Figure 9. Community organizers and leaders, LGUs and NGOs bring a toolbox of participatory approaches to the community.

4. What is being done to ensure local resource users are not alienated from or lose control over the management of MPAs?
5. What are the direct and indirect benefits derived by particular stakeholders from a MPA? Are stakeholders aware of these benefits? What mechanisms are in place to ensure equitable distribution of benefits?
6. Are educational programs initiated to inspire support from incoming stakeholders not involved in the establishment of MPAs?

➤ ***Secondary theme: Conflict between jurisdictional units***

Context:

Conflicts over access to coastal areas and their resources have arisen between neighboring municipalities. In some areas of the Philippines, neighboring municipalities lack coordination concerning the use, allocation and access to marine resources. This is an example of a

conflicting jurisdictional role that inhibits effective enforcement in municipal waters. If these national and local units can strike a balance of powers and authorities through better communication, increased collaboration is possible.

Challenging Questions for ICM Design:

1. What mechanisms are in place, or are needed, to alleviate conflict between neighboring LGUs? Describe mechanisms designed to improve coordination. If these mechanisms are not in place, how would you design a strategy to improve relations between neighboring municipalities?
2. How have management plans evolved between neighboring LGUs to account for the overlapping boundaries of marine ecosystems (Figure 10)? If plans have not taken this into consideration, how should they?

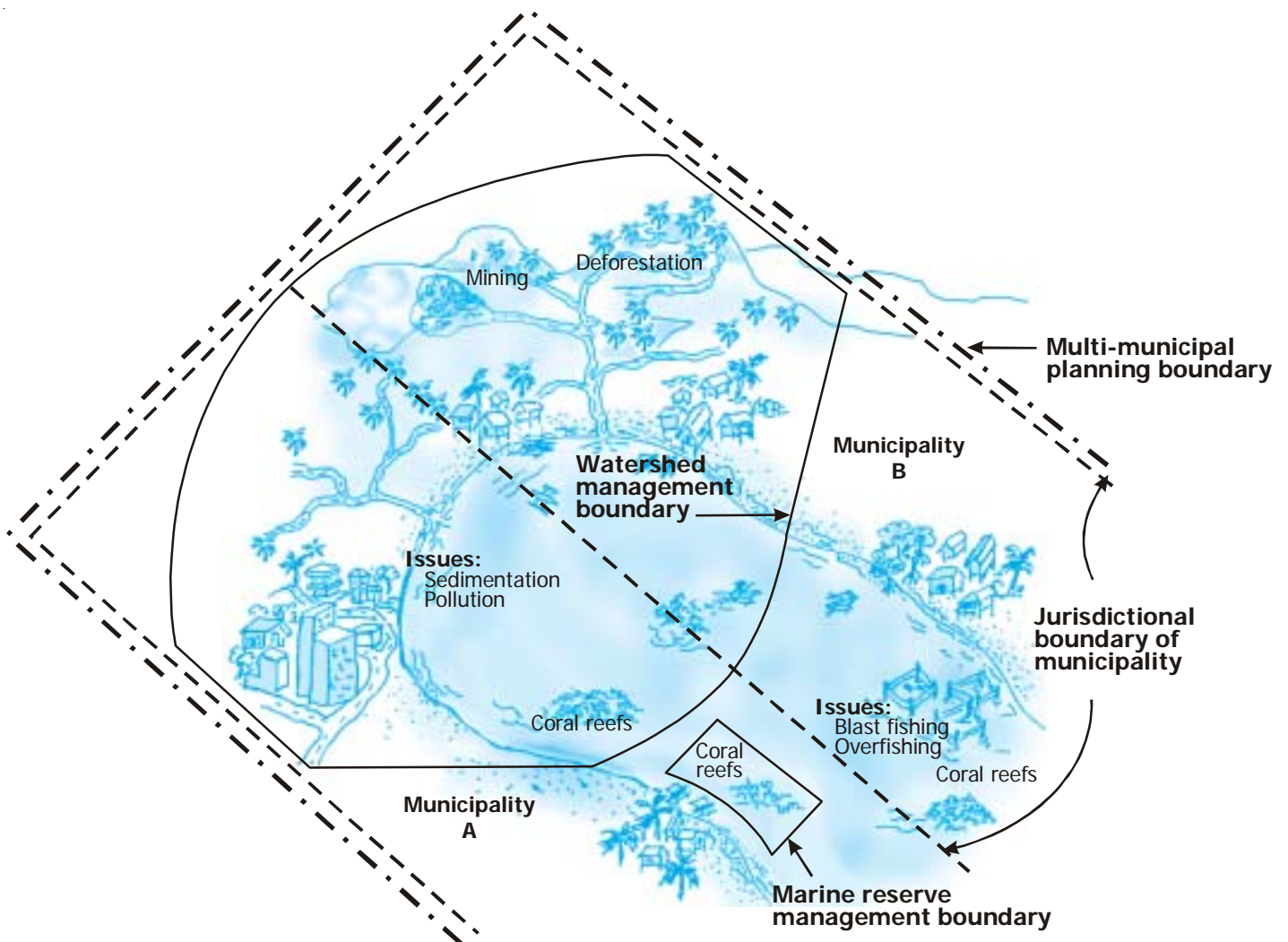


Figure 10. Jurisdictional, planning and management boundaries for a coastal area.

Primary theme: Accountability

➤ **Secondary theme: Building administrative accountability within the public sector**

Context:

Reallocating authority and responsibility for ICM from the national government to provincial and municipal government agencies, and communities, carries with it the assumption that those to whom responsibility is transferred will be held accountable for their administrative actions (Figure 11). Also, in designing effective ICM systems, it is important that the national government agencies be held accountable to the interests of decentralized institutions for their remaining responsibilities. The concept of accountability also connotes that errors or instances of noncompliance by officials will be identified and remedied in some fashion. It is important to examine mechanisms of administrative accountability (i.e., project review procedures, hearings, published reports or newsletters, audits, etc.) among public sector agencies at all levels.

Challenging Questions for ICM Design:

1. For what activities, decisions or behaviors will government authorities at each level be held accountable?
2. How will judgment be made about the appropriateness of administrative behavior?

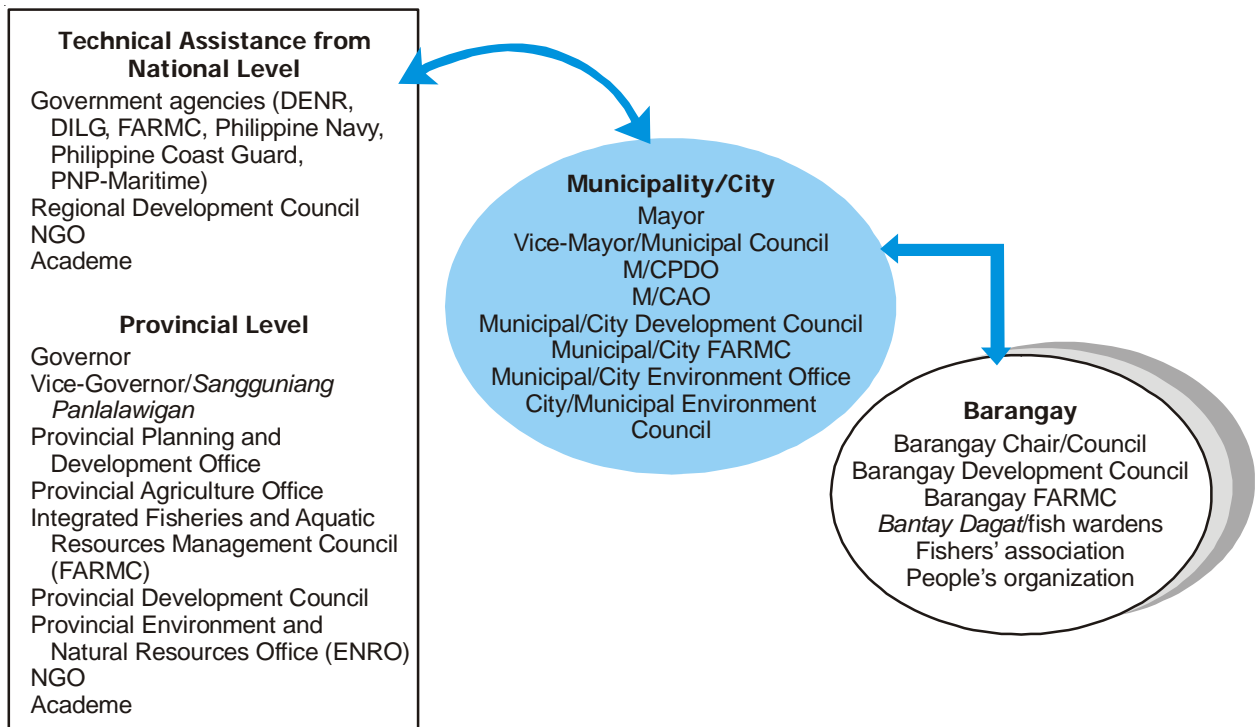


Figure 11. Key participants in municipal ICM units.

3. How will instances of noncompliance be addressed?
4. Are mechanisms in place to facilitate increased accountability among government agencies?

➤ **Secondary theme: Building accountability outside the public sector**

Context:

A co-management situation in which stakeholders from various sectors (NGOs, government units, businesses, communities, etc.) are involved is more likely to allow ICM tasks to be carried out more accountably than a single institution solely responsible for administering these tasks (Figure 12). Co-management refers to “the sharing of responsibility and authority between the government and the community of local fishers to manage a fishery” (Pomeroy and Berkes 1997).

In a co-management context, the level of accountability has the potential to be raised through increasing the number of committed actors working together to perform a given task. In a decentralized system, local institutions can better respond to local needs and aspirations. Decentralizing decisionmaking has the potential to shift the power relationships in local situations. It is important to examine which stakeholders are empowered in decentralization because these acts of empowerment shape the outcomes that can be expected from ICM. Which stakeholders are empowered in a given situation depends on the dynamics and agendas of the institutions involved.

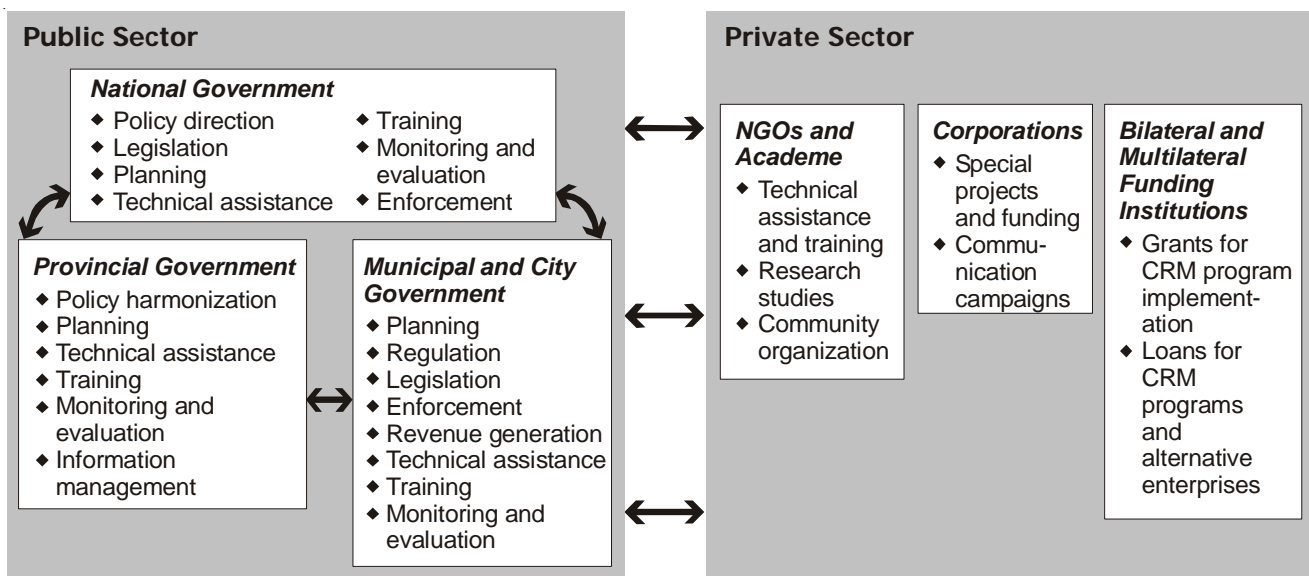


Figure 12. Emerging institutional arrangements and responsibilities for coastal management in the Philippines.

Challenging Questions for ICM Design:

1. What is the nature of the interests of the private actors, NGOs and government officials involved in a given coastal management activity?
2. In what way are private sector, NGOs and government institutions accountable? Are they accountable both “downwards” (to partners, community members, staff and supporters), and “upwards” (to their trustees, donors and host governments)?
3. Are there barriers (political, legislative, etc.) that may hinder co-management efforts?
4. How can these barriers be negotiated to enhance co-management efforts?

➤ *Secondary theme: Building accountability among LGUs, lenders and resource users*

Context:

When private lending institutions assist NGOs or LGUs in ICM activities, the agenda or interests of the lending institution are often promoted. This can decrease accountability of NGOs or government agencies to local resource users. Due to the high level of dependence of government organizations and NGOs upon donor institutions for support, accountability may shift away from the grassroots level. Along with this, performance measures may be based on criteria defined by donors. It is imperative that accountability to local resource users is not overlooked by lending agencies.

Challenging Questions for ICM Design:

1. Whose interests are being represented by a given coastal management policy?
2. How can the interests of local resource users be best represented?

Primary theme: Coordination and collaboration

➤ *Secondary theme: Need for clarity regarding roles and legal authority*

Context:

The recent decentralization of authority over ICM activities demands increased horizontal (e.g., within national agencies) and vertical (e.g., between municipal and provincial levels) coordination among government agencies. The current level of coordination is insufficient, as overlapping roles and policies inhibit the effective management of ICM initiatives. When legislation influences different administrative levels (national, regional, provincial and municipal) and is implemented by different government agencies (DENR, DA-BFAR), institutions should coordinate efforts.

The Philippine Local Government Code of 1991 provides LGU with primary authority to manage resources found within territorial boundaries. However, national government

agencies (DENR and BFAR) are expected to provide LGUs with technical assistance for managing municipal waters. The DENR is responsible for conserving and protecting natural resources in the entire archipelago, while BFAR is charged with protecting fisheries and marine resources. The historical authority of BFAR (created in 1975) limits the more expansive authority of DENR (created in 1987). For example, overlapping authority between LGUs and DENR affects the management of mangroves, beach areas and other land-use concerns affecting regulation of developments in the coastal zone. Due to lack of clarity regarding management and legal authority over many coastal management activities, many LGU personnel do not understand existing laws pertaining to ICM.

Challenging Questions for ICM Design:

1. Describe conflicting roles and policies for ICM in your area. What should be done to delineate coastal management and jurisdictional roles?
2. Discuss the role of DENR and BFAR in your area. Are there conflicting or overlapping roles and policies between the two agencies? If so, what should be done to bridge gaps and mitigate conflicts between these institutions and the LGU?
3. What has been done to help LGU officials better understand their legal and management responsibilities for ICM? What else should be done?
4. Discuss the legal mechanisms in place to facilitate coordination among local, provincial and national agencies. Are they sufficient to facilitate coordination?

➤ *Secondary theme: Encouraging intergovernmental consultation*

Context:

There is a lack of intergovernmental consultation, collaboration and review procedures. While national agencies have transferred a substantial amount of legal authority and management responsibility to LGUs, relatively little has been done to develop new organizational mechanisms to assist local governments in implementing ICM. Intergovernmental coordination mechanisms and procedures for reviewing local government management activities are needed. The extent to which government institutions at different levels interact to plan and implement ICM varies considerably from site to site around the country. The type and frequency of coordination depend on many local variables. Regional and provincial offices are important for facilitating coordination since they are often responsible for initiating and planning particular projects.

Challenging Questions for ICM Design:

1. What problems in coordination have been identified by LGU staff? By NGOs, academics or others?

2. How well do existing coordination mechanisms work? How can they be improved?
3. What types of intergovernmental conflicts have emerged? How have they been addressed?
4. What incentives exist or can be created to improve coordination? To encourage engagement by regional or provincial offices as coordinating bodies?

➤ ***Secondary theme: Need for inter-LGU collaboration***

Context:

When one institution, such as an LGU, is responsible for ICM activities, it is essential that it collaborates and works effectively with other LGUs and the central government. In any decentralized context, coordination among institutions is essential for implementing and sustaining effective ICM processes. When neighboring municipalities are participating jointly in ICM initiatives, intermayoral differences can impede abilities to coordinate ICM projects. Outside actors, such as NGOs, if present, can assist in fostering intermayoral relationships.

Challenging Questions for ICM Design:

1. What coordinating mechanisms are in place that allow for increased inter-organizational coordination between public and private sector agencies in neighboring LGUs? For example, do joint planning organizations take part in collective decisionmaking?
2. What conflict resolution mechanisms are in place to ensure collaboration and coordination between public officials and stakeholders?

➤ ***Secondary theme: NGOs assisting coordination***

Context:

Formerly, many NGOs did not maintain close partnerships with central government agencies, but instead worked mainly with fishers and to some extent the private sector in community-based conservation work. Increasingly, NGOs are building partnerships with government organizations and private institutions involved with ICM efforts (Figure 13). In many cases, this has resulted in improved ICM. In this context, an environment is created in which public sector responsibilities are distributed among a wide range of actors in the private sector, including local businesses and NGOs. It is essential then to understand the roles and coordination issues among the different actors and the public sector. In some cases, the mere presence of outside actors is a catalyst for coordination among organizations, thus bringing together institutions that are working on similar ICM-related tasks (Figure 13).

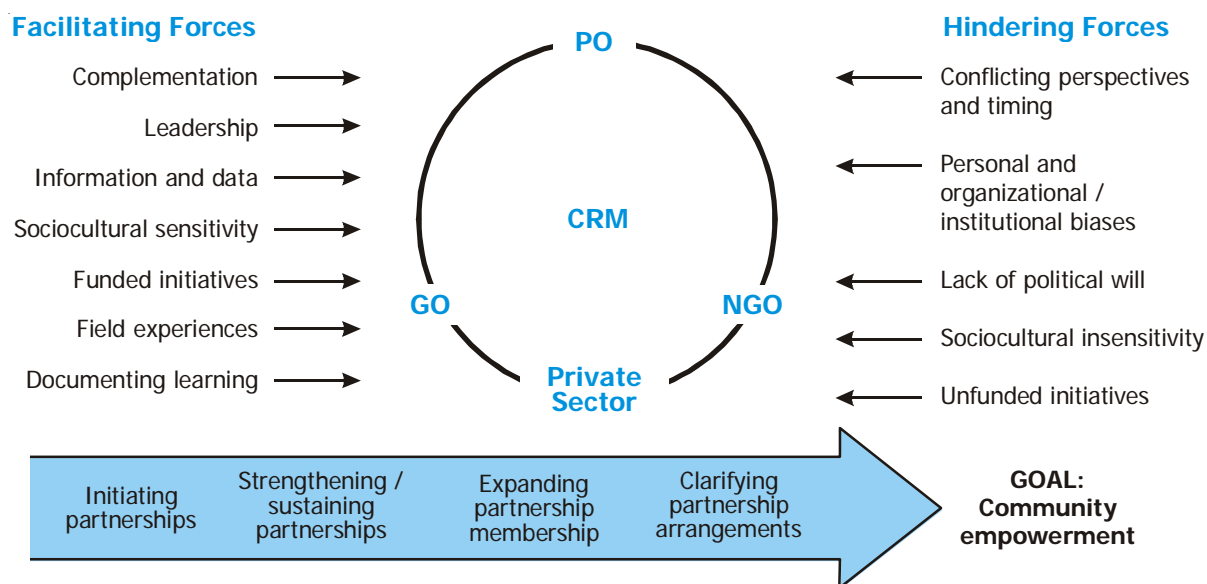


Figure 13. Force field analysis on building partnerships for community empowerment (IRR 1997).

Challenging Questions for ICM Design:

1. What coordination mechanisms are in place that strive to increase coordination and collaboration between institutions involved in ICM?
 - a. Between government agencies and NGOs?
 - b. Between government agencies and businesses?
 - c. Between government agencies and industry?
 - d. Between government agencies and resource users?
 - e. Between businesses and resource users?
2. What conflict resolution mechanisms are in place to improve coordination and collaboration for each institutional combination described above?

➤ *Secondary theme: Uncertainty in planning and administrative practices*

Context:

Uncertainty surrounds the planning and administrative practices required for effective management. The relative newness of coastal management has created some uncertainty at all government levels about how to effectively integrate existing management regimes into new management practices. This is particularly true for fisheries management, which has never been well integrated into ICM. This is also true for shoreline management, and the need to integrate building, pollution control and other development activities into the coastal management framework.

Challenging Questions for ICM Design:

1. What is being done to align missions and administrative procedures among key national agencies (e.g., DENR, BFAR) and LGUs?
2. What mechanisms or forums exist to ensure communication between responsible agencies?
3. How can fisheries management, shoreline development, pollution control and other developmental activities be woven into the ICM framework?

➤ *Secondary theme: Need for involvement across sociocultural lines*

Context:

Sustaining ICM activities is more challenging in communities with diverse social and cultural groups. The Philippines is an island nation rich in both cultural and biological diversity. The involvement of community members in ICM activities across the country varies; for example, some ICM processes actively engage all stakeholders in activities while others involve only local fishers or tourism businesses. In communities with diverse sociocultural populations, encouraging broad participation and collaboration may be difficult due to cultural differences. However, fostering participation across sociocultural lines will increase the success of ICM initiatives.



Mike Ross

A public hearing, facilitated by LGU and DENR, with the island community to discuss the municipal ordinance to approve the Gilutongan Marine Sanctuary (Olango).

Challenging Questions for ICM Design:

1. Describe the various communities involved in ICM activities. Include observations on the religious, social and cultural makeup of each community.
2. How are these various groups dependent upon coastal resources? Describe how they are involved in ICM activities. What is currently being done to increase their participation in ICM activities?
3. What is needed in terms of community organizing to ensure participation across sociocultural lines? To ensure benefits are distributed equally to all groups in your community? Who should lead these organizing efforts? What resources will they need (e.g., financial, material, legal, etc.) and who will provide them (Figure 14)?



Toni Parras

Involving women in CRM is an important strategy in community organizing.

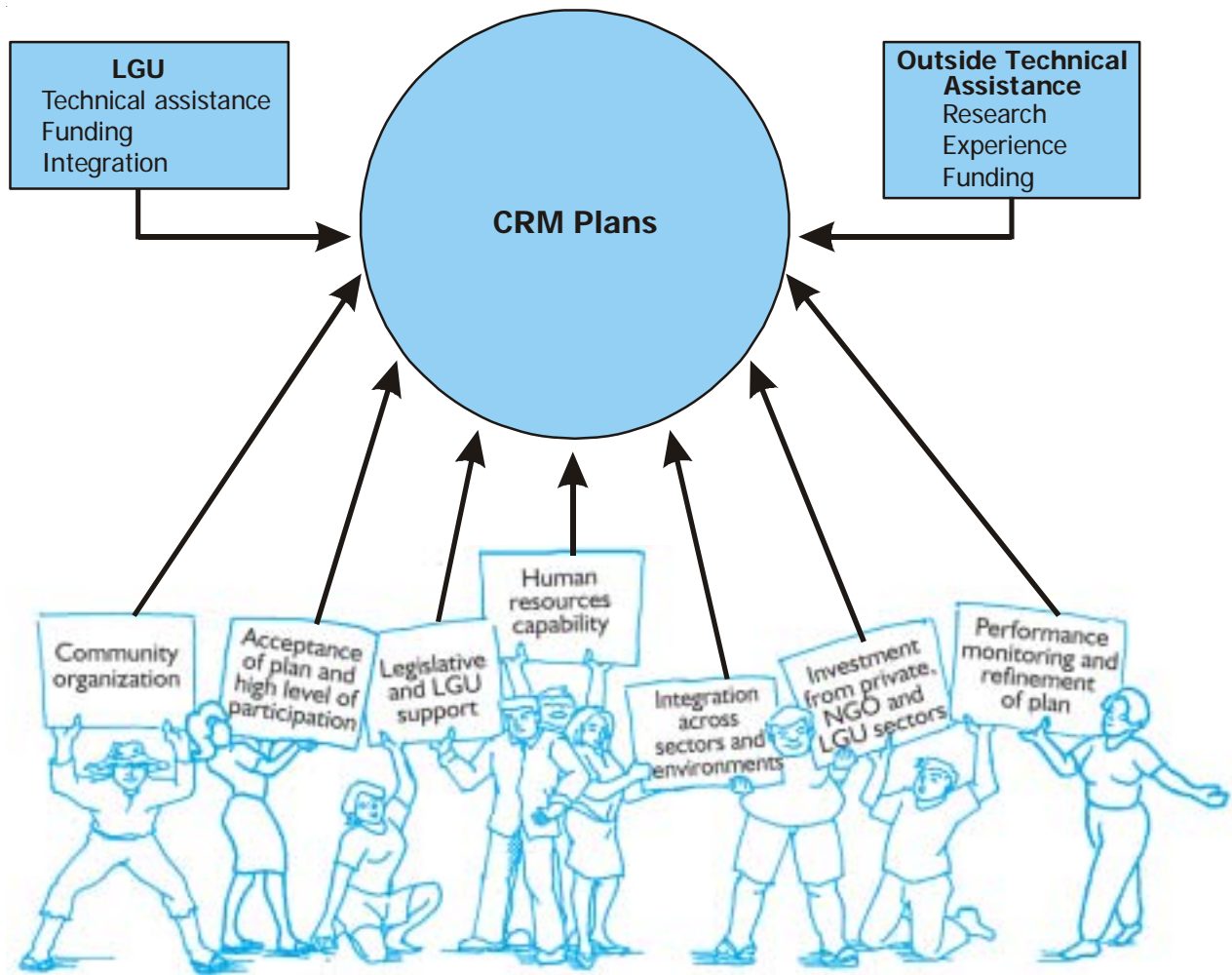


Figure 14. Resources and conditions need for implementation of a CRM plan.

Primary theme: Legislation and enforcement

➤ *Secondary theme: Lack of a legal framework for ICM*

Context:

There is an absence of a legal and institutional framework for ICM. This inhibits institutions from working in an integrated manner. The Local Government Code (Santiago 2002) has the potential to provide a strong framework for coastal management, including the following provisions which have implications for ICM: power of the local officials to adopt measures that protect the environment; duty to enforce fisheries laws; encouragement for inter-LGU collaboration; and promotion of community-based management of coastal resources (Figure 15).

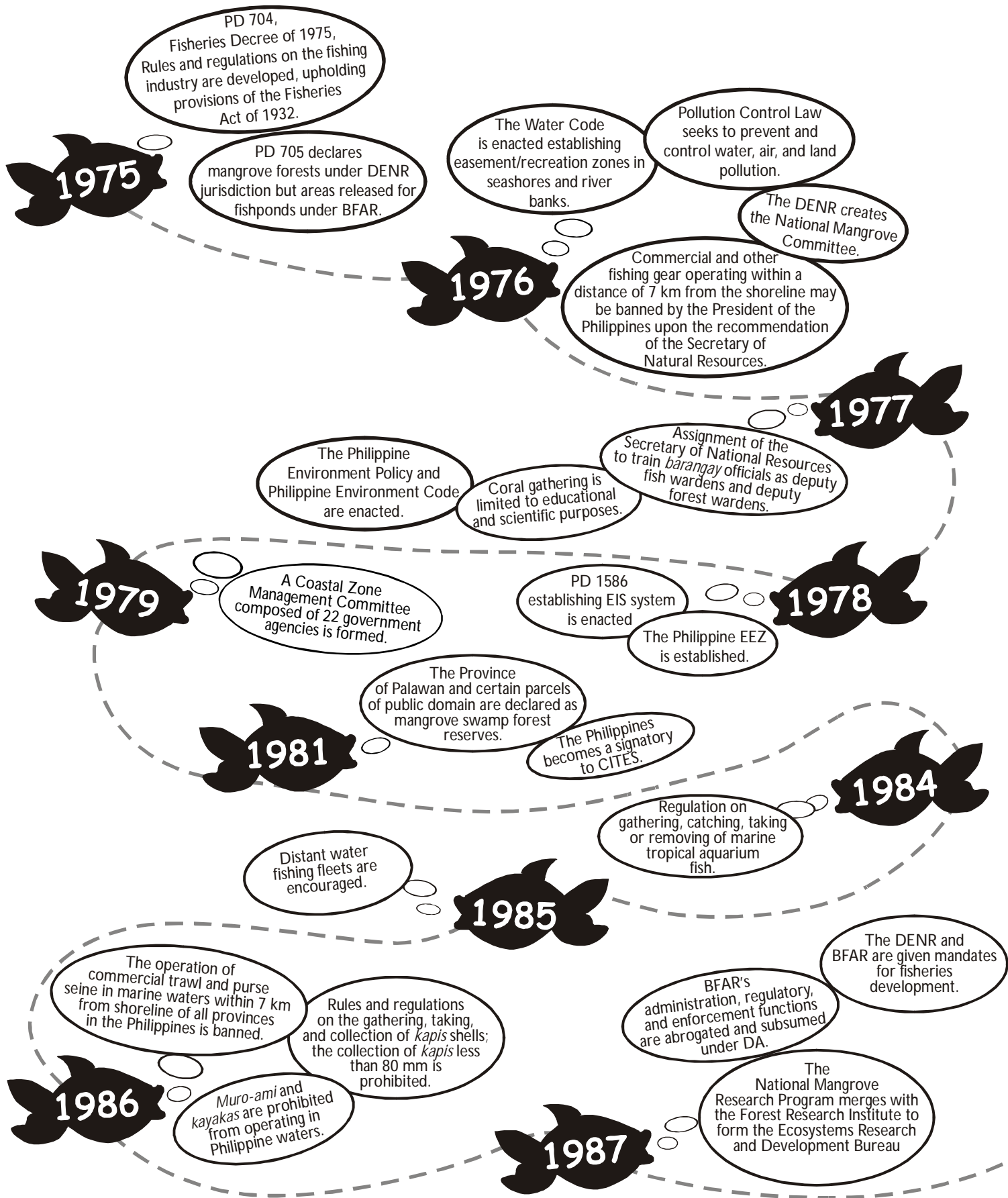
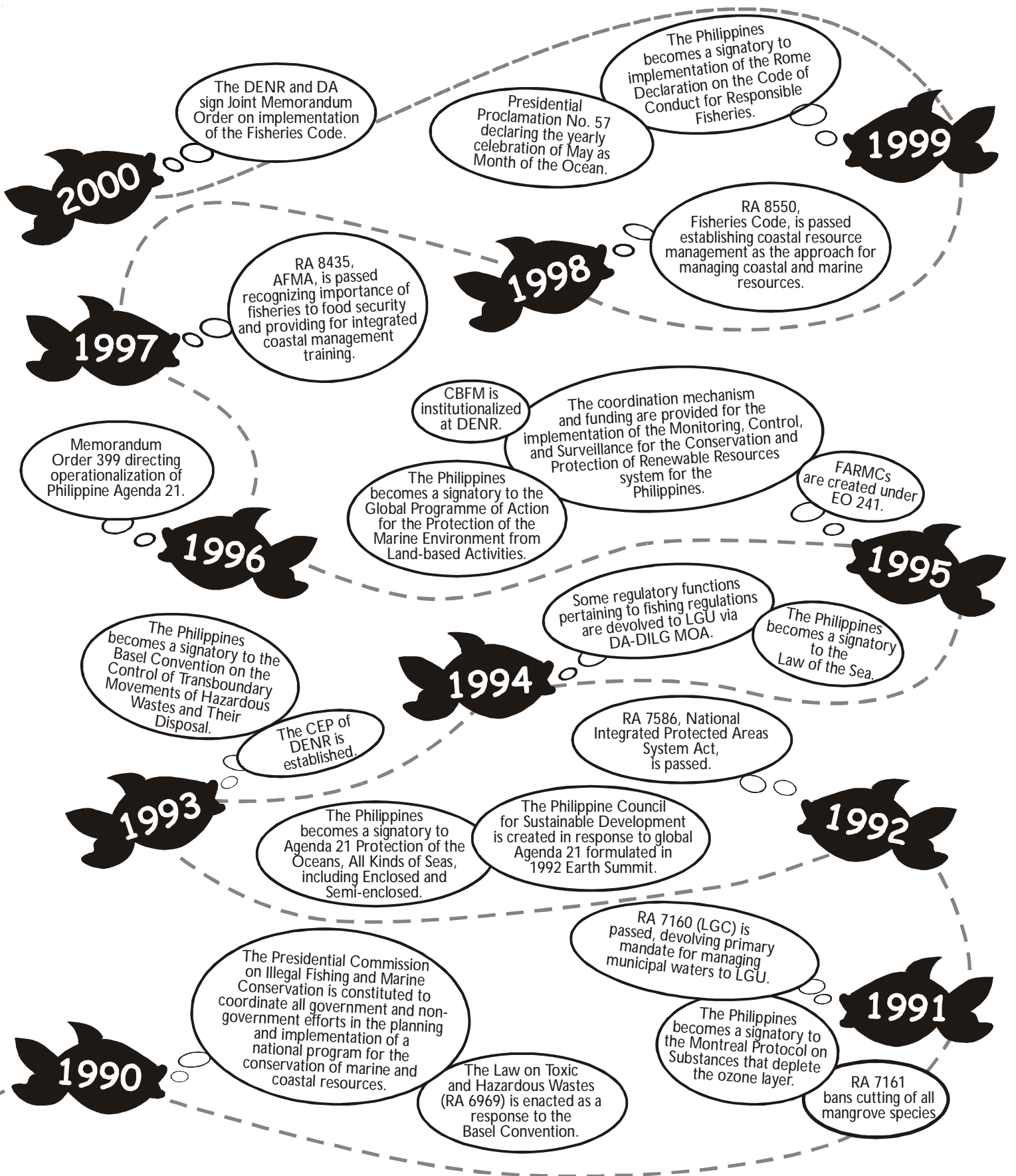


Figure 15. History of laws and policies on coastal resources in the Philippines.



The creation of this legal framework is necessary to ensure that government policy for ICM is implemented. Without such a framework, there is no basis within which policies can be formulated and actions implemented. Ultimately what is needed is a formal structure to allow institutions to work in an integrated manner that ensures full implementation of ICM. Due to the absence of such a framework, ICM initiatives are vulnerable to political and administrative changes at the local level, and there are inadequacies and discrepancies in legislation (e.g., outdated laws are not updated to new principles, gaps and overlaps in jurisdiction, etc.) that persist.

Challenging Questions for ICM Design:

1. What mechanisms exist to improve the legal and institutional structure for ICM?
2. What role will ICM project affiliates play in strengthening the legal framework for ICM?
3. What measures are in place to eliminate inadequacies and discrepancies in existing legislation?
4. What legal measures encourage institutions to work together to strengthen ICM practices? How can these be highlighted and reinforced?

➤ *Secondary theme: Overlapping jurisdictions hamper effective law enforcement*

Context:

Overlapping jurisdictions of coastal law enforcement units hamper effective enforcement of coastal management laws. For example, *Bantay Dagat* cannot fully prosecute cases because their powers overlap with those of the Philippine Coast Guard or PNP. The primary responsibility to enforce laws in municipal waters lies with LGU. However, many individuals are convinced that enforcement powers are not fully devolved to LGU.

Challenging Questions for ICM Design:

1. Describe the powers given to enforcement units to prosecute ICM-related cases.
2. Describe the educational mechanisms in place for enforcement units to learn about ICM regulations.
3. Do officers understand their roles and jurisdictions? Do their roles overlap or conflict with those of other agencies or individuals? If so, what mechanisms are in place to mediate potential conflicts?

➤ *Secondary theme: Inadequate law enforcement*

Context:

Informal and inconsistent enforcement of ICM laws threatens the long-term effectiveness of coastal management initiatives. ICM regimes will collapse without the enforcement of basic regulations. For instance, in some areas of the Philippines, the use of compressors, poison, dynamite, fine-mesh nets and superlights remains common. The cutting of mangroves also persists despite stringent requirements set by BFAR and DENR. Oftentimes, despite the high number of apprehensions, few cases are filed and even fewer convictions are made (Figure 16). The presence of informal justice systems, consisting of informal arrangements between and among political leaders, enforcers and government agencies where cases are settled out of court, erodes the legitimacy of ICM laws. These local authorities should not be given the discretion to sidestep the formal justice system and impose their own penalties.

Challenging Questions for ICM Design:

1. Do local ordinances allow for the enforcement of ICM regulations?
2. Describe the enforcement system that has been established to ensure ICM regulations are followed.

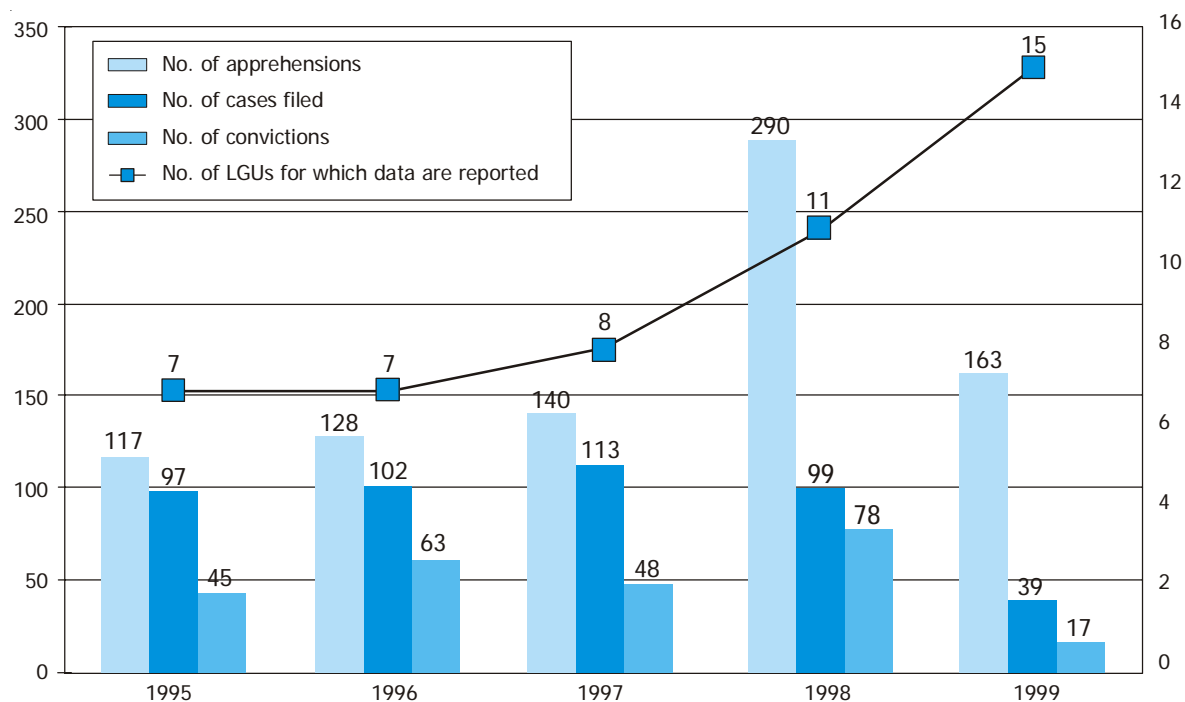


Figure 16. Trends in coastal law enforcement at the provincial level, based on records in the Municipal Coastal Database.

3. Do enforcement units have incentives to prosecute offenders of ICM laws?
4. Do those responsible for enforcing ICM regulations have the funding, equipment and other resources needed to carry out their tasks? If not, what are they lacking and where can these resources be obtained?
5. What are the penalties for breaking ICM laws? What can be done to ensure that the tools used to commit crimes are confiscated?
6. Are enforcement and prosecution activities focused equally on various levels of illegal activities (e.g., illegal fishers, suppliers of illegal gears, and marketers of illegally-caught fish)?

For more information on economic incentives, conflict, financing mechanisms, coordination and collaboration, accountability and ICM legislation, refer to: DENR *et al.* (2001b–2001e, 2001h); Pomeroy *et al.* (2002); Christie *et al.* (2003); Eisma (2003); Lowry *et al.* (2003); Oracion (2003); Pollnac *et al.* (2003); and Sievanen (2003).

PHASE 4: MONITORING AND EVALUATION

- ♦ Monitoring and evaluation
- ♦ Refinement of management plan

Primary theme: Project review procedures

- *Secondary theme: Need for project monitoring programs*

Context:

ICM processes are more likely to continue when the results of project monitoring programs are used to influence the development of ICM activities. The results should guide ICM project design. Projects should be revised midstream based on the results.

Challenging Questions for ICM Design:

1. Are ICM projects of interest monitored? If so, who monitors them? What activities or resources are monitored? When did monitoring begin and how often does it take place?
2. If ICM projects in your community are not monitored, what should be done? Who should be involved with monitoring, etc.?
3. Are monitoring results used to influence project activities? If so, how? If not, how can results be used to benefit ongoing ICM initiatives?
4. What are the components of a complete and effective monitoring system? Should biological, social and institutional information be collected? What are the trade-offs and cost-benefits of monitoring?

5. Are resources available to conduct monitoring? If not, how can this be remedied?

➤ *Secondary theme: Need for review of LGU coastal programs*

Context:

In the existing Philippine decentralized coastal management system, neither DENR nor BFAR reviews LGU coastal programs for compliance with national goals. There appears to be no formal system by which the coastal management activities of LGUs are scrutinized by national agency officials. Administrative monitoring is often seen by subordinate agencies as a labor intensive and intrusive process that does not adequately gauge either the level of effort or the quality of what they do. Local officials often regard the indicators of effectiveness used by central government agencies as invalid, incomplete or irrelevant. Questions about the validity of an accountability process can turn to a more general critique of the legitimacy of central government scrutiny – and local government resistance to continued scrutiny by upper-level government officials.



Maria Fe Portigo

Community members are empowered by collecting and recording data during baseline assessments and subsequent monitoring.

Challenging Questions for ICM Design:

1. Who will review the ICM plans of LGUs to ensure they comply with national goals?
2. How will the ICM plans of LGUs be evaluated? What indicators of effectiveness should be used?
3. What mechanisms are in place to ensure that program implementers are held accountable to upper and lower-level officials?
4. What mechanisms are in place to increase understanding between national and LGU officials regarding monitoring and review of coastal programs?

➤ *Secondary theme: Need for oversight in the implementation of development projects*

Context:

Frequently, there is a lack of political will to implement ICM plans on broad scales. Effective management requires an administrative culture that allows the denial of projects that benefit only a few people and threaten the sustainable use of coastal resources. In recent years, several infrastructure and private enterprise development projects have been denied permits because they created so much opposition (Figure 17). Too frequently, however, stakeholders are not well informed about the consequences of such projects. Many projects

that should be denied for environmental reasons are never properly reviewed. Many small-scale resort developments, for example, do not comply with shoreline development regulations.

Challenging Questions for ICM Design:

1. How do the institutional norms and practices of DENR and BFAR support or inhibit effective local government management?
2. What is being done to create organizational cultures that support effective management?
3. What can be done to ensure that development projects are screened thoroughly prior to implementation?

For more information on project review procedures, see: DENR *et al.* (2001c-2001e, 2001g); Lowry *et al.* (2003); Pollnac *et al.* (2003); and Sievanen (2003).

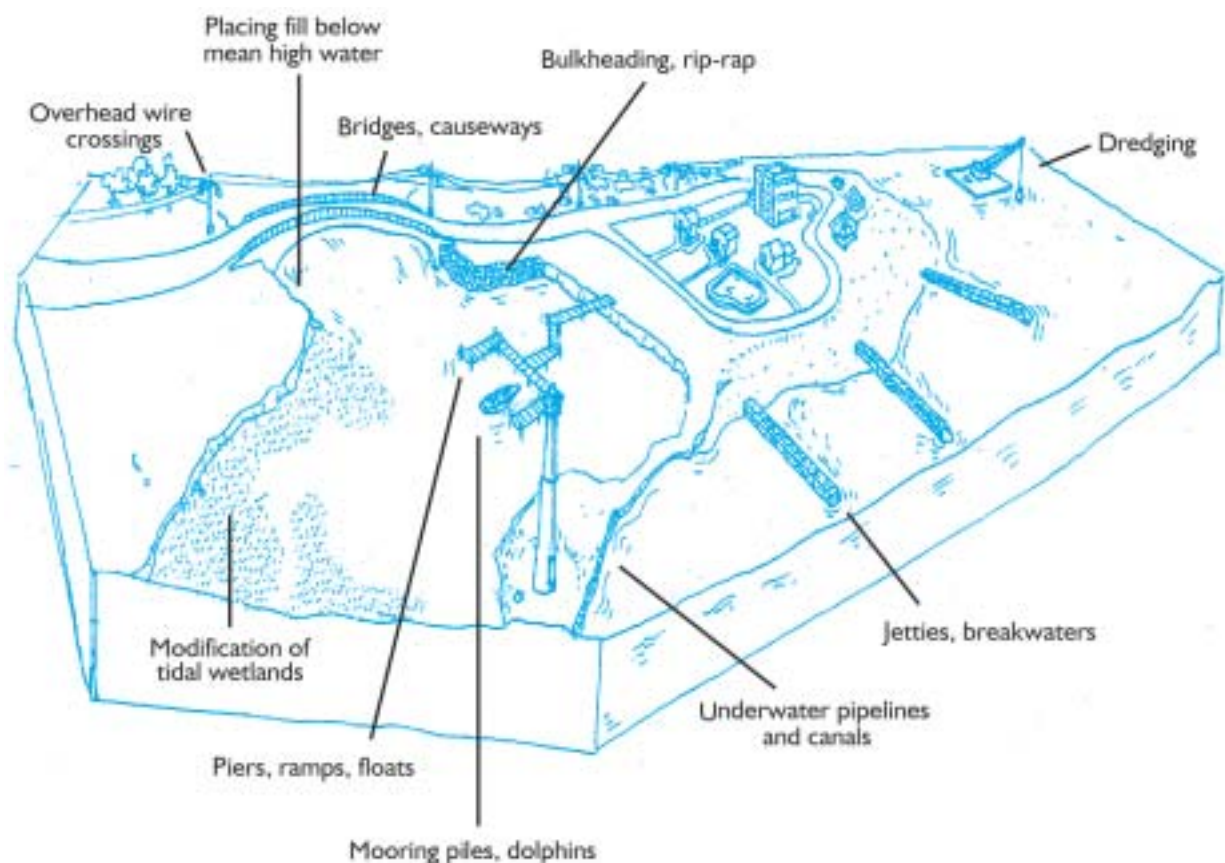


Figure 17. Development activities that require environmental review and clearance because of potential impacts (adapted from Carroll 1976).

PHASE 5: INFORMATION MANAGEMENT, EDUCATION AND OUTREACH

- ♦ Information management
- ♦ Education, information and communication

Primary theme: Information management

- *Secondary theme: Lack of properly maintained data management systems*

Context:

Frequently biophysical and social data are often underutilized because there are no apparent mechanisms for collecting and storing data. If a database is available, the information contained therein is frequently not promptly and regularly updated. Also, information collected by ICM projects is rarely properly maintained following formal project termination. Due to the absence of a simple system for retrieving existing biophysical and social data, some ICM practitioners do not have access to important information, and therefore cannot make informed decisions. In the past, large donor projects have invested considerable time, effort and resources in the collection of baseline data. However, once collected, baseline information has generally been poorly managed. Recent ICM projects in the Philippines have invested a great deal of energy and funding in developing protocols, information analysis and storage mechanisms, particularly at the LGU level. The sustainability of ICM projects depends on maintaining these data management systems following formal project termination. To do this, database management systems must be regularly updated, analyzed and utilized in decisionmaking processes.



Rosario Farrarons

Information management through the use of computers and databases is vital in ICM planning.

Challenging Questions for ICM Design:

1. What are the barriers to database management?
2. Describe the financial needs involved in generating, managing and updating data systems. How will these needs be met over the long term? What are the barriers to accessing biophysical and social data?
3. How can a data management system be designed so that data can be promptly and regularly updated?
4. Describe the data collection scheme to be used in the ICM project.
5. What mechanisms are in place to ensure that databases are maintained following formal project termination?
6. How can results of studies be disseminated to stakeholders that need them most?

➤ *Secondary theme: Reliance on external technical assistance for database development*

Context:

There is a lack of technically trained personnel within LGUs who can effectively interpret biophysical and social data and provide assistance to administrators and planners regarding the use of such data. The extent and use of data are limited by institutional capabilities, particularly in terms of technically trained personnel. In the Philippines, participatory monitoring systems involving local residents are frequently used in data collection. Technical assistance must be available once data sets are acquired.

Challenging Questions for ICM Design:

1. Describe the biophysical and social monitoring system established in your community. Who collects the data? Where are the data stored? How are the data used?
2. Are there trained people in your institution or LGU who can effectively manage and interpret biophysical and social data? If yes, who are they and what are their skills? If not, what are your training needs? Who could provide such training and how can this be financed?
3. What data management resources are available locally (e.g., computer systems, data managers, etc.)? What data management resources do you lack? How can these be obtained?
4. Identify outside institutions that can provide assistance in obtaining and/or utilizing biophysical and social data. What type of assistance can they provide? Is there counterpart assistance required? If yes, describe.
5. If outside institutions (e.g., foreign aid projects, national NGOs, etc.) have developed biophysical and social data sets, have they worked to ensure that these will be maintained by local institutions or LGUs following the termination of their project?

Primary theme: Information dissemination and community outreach

➤ *Secondary theme: Creating information feedback mechanisms*

Context:

Information feedback mechanisms are needed to provide resource users and policymakers with knowledge of the opportunities, benefits, and challenges associated with ICM. Feedback mechanisms (e.g., community meetings, newspaper articles, etc.) can empower and increase the involvement of local communities in CRM. Data dissemination helps to educate people about the environmental and social impacts of management decisions.

Challenging Questions for ICM Design:

1. Are mechanisms in place to provide adequate feedback to resource users and policymakers regarding the condition of marine and coastal resources? If yes, what are they? If not, how can these mechanisms be established?
2. What means of information dissemination are most effective?

➤ ***Secondary theme: National agencies are challenged by local government needs***

Context:

Coastal communities nationwide are in need of assistance in implementing environmental management systems. Local agencies frequently lack the needed funds, technical capabilities and human resources to effectively implement ICM activities. In some coastal communities, DENR is providing training and technical assistance. However, this chronic problem will not go away soon, given the tremendous job to be done in assisting LGUs with ICM. The difference between the need for capacity-building and the ability of national agencies to provide needed assistance is substantial.



May is "Month of the Ocean" in the Philippines. Information, education and communication programs are designed to promote protection and sustainable use of coastal resources in May and throughout the year.

Challenging Questions for ICM Design:

1. What skills or competencies are critical for effective local management?
2. What skills are critical for national agency personnel to work with local agencies?
3. What is being done to address local deficits and key technical competencies of agency personnel?
4. What human, technical or financial resources are being made available? By whom and to whom?

For more knowledge of community outreach and information management and dissemination, refer to: DENR *et al.* (2001c-2001e); Christie *et al.* (2003); Eisma (2003); Lowry *et al.* (2003); Olsen de Leon (2003); Oracion (2003); Pollnac *et al.* (2003); and Sievanen (2003).

IV. ICM PROCESS

SUSTAINABILITY:

A SCORECARD

The Integrated Coastal Management Sustainability Research Project (ICMSRP) identified several basic characteristics that are associated with sustainable integrated coastal management (ICM) processes. This scorecard is intended to guide project design efforts. Criteria are grouped into phases based on the five-phase ICM planning process, adapted from DENR *et al.* (2001a) (see Figure 2).

The research conducted by ICMSRP does not indicate that one criterion or characteristic is more important than another for all contexts. Also, not all issues are relevant for all projects and all circumstances. It may not be feasible for a single ICM endeavor to consider each of the characteristics below. Prioritize the issues that are most critical to your specific project's needs and add criteria when appropriate in the space provided. It is suggested that you use this scorecard as a tool to encourage self-reflection that is grounded in your particular context.

PHASE 1. ISSUE IDENTIFICATION AND BASELINE ASSESSMENT

The Use of Biophysical and Social Data

- o If necessary, does the proposed ICM project establish a biophysical and social monitoring program to collect baseline information?
- o If possible, are monitoring programs participatory in nature?
- o Is there a clear plan for sharing monitoring results with stakeholders?
- o Are there mechanisms in place to ensure that government administrations make decisions regarding ICM activities and coastal zone development based on biophysical and social data?
- o _____
- o _____
- o _____

- o _____
- o _____

PHASE 2: ICM PLAN PREPARATION AND ADOPTION

Resources for Management

- o Does the proposed ICM project provide adequate resources (e.g., financial, training, material) to meet stated goals?
- o Is there a clear and logical plan detailing how all relevant institutions will contribute to ICM efforts?
- o Does the proposed ICM project consider how to effectively train and support coastal management practitioners and law enforcement units?

Commitment

- o Does the proposed ICM project consider how to sustain support (e.g., financial, technical, managerial, etc.) through changes in political administrations?
- o Does the project seek to encourage commitment to ICM by decisionmaking bodies at various levels of governance (e.g., community, municipal, provincial, national, etc.)?
- o Does the project consider and plan for differences in motivations and levels of commitment to ICM by diverse stakeholders?
- o Are there incentives (e.g., funding, training, influence, etc.) embedded in the proposed ICM project to encourage local management?
- o Does the proposed ICM project encourage long-term commitment by outside actors (e.g., technical advisors, donors, etc.)?
- o _____
- o _____
- o _____
- o _____

PHASE 3: ACTION PLAN AND PROJECT IMPLEMENTATION

Economic Incentives

- o Will the proposed ICM project generate tangible economic benefits for various stakeholders, including government agencies, coastal communities, etc.?
- o Will proposed alternative livelihood projects establish transparent planning processes and accountability mechanisms?
- o Are mechanisms proposed to help ensure that benefits (e.g., economic, social, environmental, etc.) are realized and enjoyed equitably by diverse stakeholder groups in the ICM process?

Financing Mechanisms

- o Does the proposed ICM project include sustainable financing mechanisms to help ensure continuance beyond formal project termination?
- o If necessary, does the proposed ICM project encourage the local government unit (LGU) to develop revenue-generating mechanisms (i.e., fees, taxes, etc.)?

Conflict

- o Does the proposed ICM project include mechanisms for conflict resolution to overcome tensions between stakeholders with contradictory interests?
- o Where marine protected areas are established, does the project seek to involve all stakeholders in their design and management?
- o Does the proposed ICM project seek to alleviate jurisdictional conflicts between neighboring municipalities, communities or government agencies?

Accountability

- o Are there mechanisms in place to ensure accountability within the public sector (i.e., between LGUs, between LGUs and the central government, etc.)?
- o Are mechanisms (e.g., communication channels, joint decisionmaking groups, etc.) proposed to increase accountability between ICM project participants and other relevant stakeholders?
- o Does the proposed ICM project improve accountability between ICM implementing institutions and local resource users?

Coordination and Collaboration

- o Does the proposed ICM project encourage consultation and coordination among public sector agencies (e.g., DENR, BFAR), particularly regarding legal and management responsibilities for ICM?
- o Are there mechanisms in place to facilitate consultation, collaboration and review procedures among government institutions at different levels (e.g., national, provincial, municipal, local) to assist LGUs in implementing ICM?
- o Are there mechanisms in place to facilitate coordination and collaboration among institutions in neighboring LGUs?
- o Does the proposed ICM project encourage participation by nongovernment organizations or other private institutions in ICM efforts? Is there a clear plan detailing the roles of these institutions?
- o Does the proposed ICM project strive to integrate existing management regimes and new management practices by improving coordination and collaboration among relevant agencies?
- o Does the proposed ICM project encourage all relevant sociocultural groups to participate in: a) issue identification, b) project design, c) process management, d) monitoring and e) outreach?

Legislation and Enforcement

- o Are there measures designed to encourage voluntary compliance and ensure enforcement with ICM-related laws?
- o Does the proposed ICM project strive to ensure that coastal law enforcement units understand ICM laws, their roles and jurisdictions?
- o Are there mechanisms or incentives in place to strengthen the legitimacy of ICM regulations through coastal law enforcement training and education programs?
- o Will the proposed ICM project function within a clear legal framework that encourages ICM?
- o Are legal jurisdictions clear?
- o _____
- o _____
- o _____
- o _____
- o _____
- o _____

PHASE 4: MONITORING AND EVALUATION

Project Review Procedures

- o Will the proposed ICM project monitor impacts on social, institutional and biophysical conditions over time?
- o Are mechanisms in place to ensure ICM projects are reviewed to comply with national and local government goals?
- o Are mechanisms in place to ensure that infrastructure and private enterprise development projects are reviewed prior to their implementation?
- o _____
- o _____
- o _____
- o _____

PHASE 5: INFORMATION MANAGEMENT, EDUCATION AND OUTREACH

Information Management

- o Does the project help to ensure that data management systems are accessible to various stakeholders?
- o Does the proposed ICM project seek to involve local institutions in the design, management and utilization of data management systems?

Information Dissemination and Community Outreach

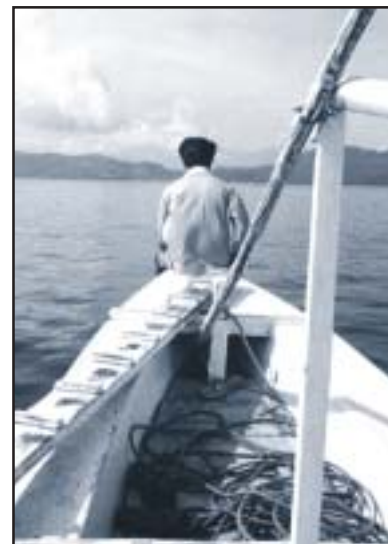
- o Are mechanisms in place to ensure relevant information is shared with resource users and policymakers?
- o Does the proposed ICM project help to ensure that national government agencies assist LGUs and local communities with resource and training needs?
- o _____
- o _____
- o _____

V. PRACTITIONER SUGGESTIONS

In addition to research findings, the Integrated Coastal Management Sustainability Research Project (ICMSRP) has solicited the advice of ICM practitioners in the field and trainers. Based on formal research and discussions with them, several ideas have emerged on ways to improve the sustainability of the ICM process.

These ideas include:

- ◆ streamlining ICM into LGU plans (i.e., comprehensive land and water use plans at the provincial and municipal levels);
- ◆ integrating ICM into sectoral (fishery, tourism, industry) plans of the LGU;
- ◆ developing ICM implementation bodies (i.e., municipal development councils or committees, provincial and municipal Environment Natural Resources Office) that are not frequently affected by changes in municipal leadership;
- ◆ establishing bodies that improve communication, trust and policy coordination among institutions;
- ◆ developing sustainable financing mechanisms (e.g., divers fees);
- ◆ elaborating mechanisms to evaluate the status of development of an ICM process (e.g., a certification process) that will help ensure appropriate institutional and financial support;
- ◆ developing monitoring protocols for biophysical and social data that are attainable given available human and financial resources;
- ◆ instituting formal conflict resolution mechanisms early in the planning process to address issues before they become well-established patterns;
- ◆ when appropriate, rely on existing laws and regulations (e.g., Fisheries Code, Department Administrative Order 17, etc.) to address conflicts between individuals and institutions; and
- ◆ encouraging learning by all stakeholders regarding social and environmental benefits of sustainable natural resource use and technical components of ICM.



Nicole Milne

Boatpeople earn money by shuttling local and foreign tourists to dive sites in Mabini and Tingloy, Batangas.

This reference book is just a start. We hope that by reading it and reflecting on your own experiences, you will discover and field test additional strategies for making the ICM process more sustainable.

CONCLUSION

Integrated coastal management (ICM) in Southeast Asia and around the world is a dynamic process. The changing needs of human populations coupled with environmental fluctuations force the process of ICM to be highly adaptive. Population growth and rapid development in the coastal zone are forcing coastal communities to rethink their use of natural resources.

This book is intended to provide ICM practitioners with insight regarding factors critical to the sustainability of the ICM process. Developed through extensive research in the Philippines, this project has provided valuable insights concerning the challenges and opportunities that lie ahead for practitioners. We hope this book will prove helpful in designing and managing your ICM-related activities.



Nicole Milne

Bobos or fish traps at Bantayan Beach, Negros Oriental, Philippines.

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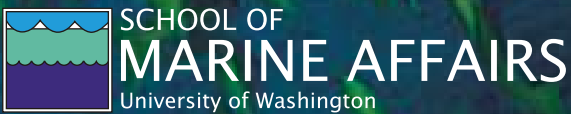
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“I protect the marine sanctuary to produce more fish and to continue the growth of coral reefs. Not for financial reasons. Because someday money might be of little value, but the marine life will be there. It will help us. Because of the abundant environment, we can continue our life. Let's say our life is simple. We eat three times a day. And that comes from our environment. That is the basis for why I'm interested to continue the protection of our environment.”



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