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Tambuli

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1998
The International Year of the Ocean

COLORS OF THE SEA

A Celebration of Philippine Maritime Culture and Heritage

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In 1994, the United Nations (UN) General Assembly formally adopted a proposal to declare 1998 the International Year of the Ocean (IYO). According to the world body, the declaration would provide "a window of opportunity for governments, organizations, and individuals to become aware of the ocean and to consider the actions needed to undertake our common responsibility to sustain the greatest common heritage we have and without which we cannot exist."

To Filipinos, 1998 is made more significant by the fact that it is also the Philippine Centennial. Filipinos are inexorably linked to their maritime heritage, a heritage born out of the country's archipelagic nature and 18,000 km coastline. Next year, during their 100th freedom anniversary, they cannot but also celebrate the Year of the Ocean.

The IYO: Protecting Our Common Future

The IYO was proposed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) General Conference based on UN Resolution XVII-17 as adopted by the 17th Session of the Intergovernmental Oceanographic Commission (IOC) Assembly. Throughout the process leading up to its declaration, the IYO enjoyed wide support from member-states of the IOC, UNESCO and the UN. To its proponents and supporters, the celebration is a unique opportunity to increase awareness of the importance of the ocean and coastal environment, and to raise greater political

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President Fidel V. Ramos of the Republic of the Philippines raises the "I Love the Ocean" sticker during the Convention of the League of Municipalities of the Philippines (see related story on page 33) in support of coastal management efforts in the country.

contents

editorial

TAMBULI—A Newsletter for Coastal Management Practitioners is on its third issue. Our circulation is now more than 1,000 and our extra print run copies are usually gone soon after printing. We are thus increasing the number printed to 3,000. The demand for information on integrated coastal management is indeed increasing in the Philippines and worldwide. We are trying to fill an expanding niche and are extremely pleased with the response so far. We get many positive comments but we also need good articles and news items to broaden our coverage of the country and some international events. We really encourage you, our readers, to send in useful material. And if you are not confident of your writing skills, do not worry, our editorial staff is willing to assist with corrections and improvements!

We are preparing for the launching of the International Year of the Ocean (IYO) for the Philippines in this issue. The lead article explains what is in store during 1998 for IYO. It seems really appropriate that IYO follows the International Year of the Reef in 1997 since the health of the ocean is the overriding factor we must all be concerned about to maintain fisheries of all kinds, coastal habitats including coral reefs and the many other reasons why a clean and life supporting ocean is essential to life on earth as we know it. It is hard to say too much about the need to protect our oceans because it seems so obvious. Yet, this does not seem to stop us humans from increasing at exponential rates the amount of waste we dump into our coastal areas and oceans. The limit is being and has been reached in many areas and the results will not be pleasant as they become known. Let us wake up and raise these issues to all appropriate levels! Sylvia Earle has said it appropriately in Time Magazine (1997):

"We should all care. The future of humankind is absolutely dependent on the state of the ocean. Without its aquatic heart and soul, earth would be as barren and inhospitable as Mars. It has taken billions of years, but here it is: a planet with a built-in source of life support. With or without forests, meadows and grasslands, the ocean would roll on, full of life. But without the ocean, there would be no forests, no meadows, no rollicking rain-filled clouds, no life-giving winds, no coral reefs, no cod, no people."

Making issues of coastal pollution and degradation of the oceans known, by whatever means, requires leadership. We as leaders in the movement to manage our coasts must be willing to stand up and inform others about the severity of the problems. This kind of leadership can come in many different forms, but first and foremost, it must start in small ways within our own areas of concern and influence.

In this issue for example, you will read about community-based coral reef management in Bohol and other sites around the Philippines. These efforts all represent leadership at the local level through municipal government personnel and community leader efforts to make small projects for sustainable management work. These leadership efforts involve taking risks by enforcing the law and forming management groups which must stand up to pressure from within and outside the community. These efforts also require long-term commitment which must come from the heart since nobody is paid to pursue these efforts. Our internal drive is what keeps us going to support and implement these projects.

Another theme in this issue is that of communication or more appropriately, "Transformational Communication", as explained in the article by Flor and Smith. This kind of communication, used to change human behavior for the better, requires another kind of leadership. This creative leadership encourages new forms of communication and provides information in an interactive forum with people. This kind of communication engages people in a two-way process which builds support for positive development. It engages people in their own development and they become better leaders in the process.

Ultimately the leadership test comes with how we live our lives. Sustainable management of resources must involve us all to make decisions which help preserve the coastal resources and the ocean we depend on. In this sense we must provide models for how others can act to improve the coastal environmental situation.

Let us start by sharing our success with others and sending contributions to the Editor of Tambuli. This is one way we can spread our experiences so others can learn from them. We look forward to hearing from you!

Editor

BOX 1.

MALACAÑAN PALACE

MANILA

MESSAGE

We Filipinos are blest in a million different ways by the oceans that embrace our 7,100 islands. We are true children of the sea, shaped and nurtured by the sea, which separates us and makes us distinct and diverse as a people, and yet also connects us in the most natural way to each other and to the rest of the world.

I am therefore greatly heartened to note that 1998, the year of the Philippine Centennial, has also been declared by the United Nations as the International Year of the Ocean. This makes 1998 doubly meaningful for us, giving us a wonderful opportunity to celebrate our rich maritime heritage and reflect on what the ocean means to us as a nation and as members of a larger global community. As we approach the 21st Century and as individual nations become more and more integrated into one big global community, we will all the more appreciate the value of the ocean as our greatest common heritage and a fragile resource base upon which we will all continue to depend. Let us not forget that we are all, individually as well as collectively, stewards of this heritage.

I call on everyone at the community level, especially the LGUs, to continue pursuing our goal of equitable growth and sustainable development. The Local Government Code of 1991 has vested in you the authority and jurisdiction over many of the resources in the coastal area. I urge you to manage these resources well for the benefit of a greater number of our people, especially our children, and all future generations of Filipinos.

Let us always remember that each of us shares the responsibility for protecting the ocean, our coastal environment, and our future. Support the International Year of the Ocean in 1998, if you love the ocean, wear a blue heart.

MABUHAY KAYONG LAHAT!

MANILA
1997
November 14, 1997

Colors ***from page 1***

visibility for ocean-related issues and their socio-economic dimensions.

In his opening address to the 29th Session of the IOC Executive Council (24 September 1996, Paris), UNESCO Director-General Federico Mayor invited UN member-states to include activities that will sensitize governments, the general public, and the society as a whole to the significance of the ocean to our common future. According to him, the IYO should be seen as a charter for public education regarding the role of the oceans for society. To achieve this, concrete steps need to be taken towards developing an overall plan for the event, a goal for which member-states of the UN have expressed interest in providing support and facilities.

Committee on Marine Sciences: Crystallizing the Benefits from IYO

As the UNESCO national focal point for all activities that concern

the oceans, the National Committee on Marine Sciences (NCMS) recognized in the IYO the opportunity to promote the oceans, particularly the seas surrounding the Philippine archipelago. The 13 member-agencies of the NCMS agreed to develop a framework for an integrated Philippine effort as the nation's contribution to the event, alongside the celebration of the Philippine Centennial, also in 1998. Initially dubbed "*Dagat ... Buhay*" (Sea ... Life), this collective effort is to be submitted to the highest authorities for evaluation, support and institutionalization.

1998
INTERNATIONAL YEAR OF THE OCEAN
LEADERSHIP CHALLENGE

In line with the goal of the IYO at the global level, *Dagat ... Buhay* seeks to:

1. Promote public awareness and understanding of the value of marine activities, and of the sea and its resources, to national welfare;
2. Ensure that the government does all it can to promote the exploration, sustainable use and conservation of the sea.

These goals run along certain themes and cross-cutting issues aimed at providing a sound basis for focusing efforts, clarifying objectives, and engaging stakeholders in the effort, as well as contributing to legislative initiatives. The themes, issues and proposed agency leads are given in Box 2.

Partnerships for Local Implementation of IYO

"Think globally, act locally," a familiar saying to many of us, cannot be more appropriately directed than towards marine environmental conservation and coastal resource management in the Philippines. The opportunity to transform an international initiative to local action is one reason the NCMS and the Coastal Resource Management Project (CRMP) have entered into a memorandum of agreement on the country's participation in the IYO.

As its contribution to the partnership, CRMP will serve as an implementing arm to help the NCMS elevate marine and coastal issues to the national social agenda through the project's media, education and social mobilization networks. CRMP will maintain the official IYO Web page (http://www.oneocean.org), which will provide Internet users up-to-date news, calendar of events and other information on the IYO. Print material from the IYO Web page will be developed for widespread dissemination in conjunction with CRMP's ongoing local and national activities.

While the above efforts are proposed to be principally under the aegis of the government, it is obvious that not one agency can do the job well on its own. The participation of local government units, coastal communities, non-government organizations and the academe is fundamental to instituting the call to action.

Local solutions to overfishing, habitat destruction and marine pollution are being sought worldwide as these responsibilities are being devolved to the most fundamental tier, the local government. With the passage of the Philippine Local Government Code (Republic Act 7160) in 1991, the responsibility for managing municipal waters up to a distance of 15 km from the shoreline has been largely devolved to local government. With these responsibilities come not only opportunities but challenges: being closest to the day-to-day problems, local government units will have the unique insight and incentive to implement sound practices in coastal resource management. What's more, they also represent the coastal environment's last safety net against total degradation. Without leadership and action on the part of local governments and communities, the coastal resource base that supports economic development in the coastal areas will ultimately collapse.

BOX 2.

THEMES	LEAD AGENCY(S)
Ocean Resources Living Resources	Coastal Environment Program-Department of Environment and Natural Resources (DENR), Bureau of Fisheries and Aquatic Resources-Department of Agriculture
Non-living Resources	Department of Energy, Mines and Geosciences Bureau-DENR
Marine Environmental Quality	Environmental Management Bureau-DENR
National Security	Philippine Navy
Maritime Transportation	Philippine Coast Guard
Recreation and Tourism	Department of Tourism
Weather, Climate and Natural Hazards	Department of Science and Techonology
ISSUES	
Science, Technology and Research	University of the Philippines
Legal Framework	Department of Foreign Affairs, College of Law-University of the Philippines
Management of Marine Areas, Uses and Resources	University of the Philippines

A Call to Action: Wear a Blue Heart

The IYO represents a whole year of opportunities to consolidate and focus all efforts in coastal management towards action and implementation. Globally, the mere fact that there is an IYO is already a clear manifestation of the international community's growing concern for the marine environment. Locally, while the effort to protect the marine environment and ensure the sustainability of the ocean's resources is still sadly inadequate, the call to action is beginning to resound into the far corners of the country. In increasing numbers, Filipinos are recognizing the important role that the ocean plays in our life-support system, and as part of our planet's climate system.

But the real measure of the Year's success can only be seen in terms of how much of the public's concern is translated into tangible steps towards a cleaner, healthier ocean. When everything is said and done, the worldwide effort to protect the marine environment could only really succeed if we all considered proper waste disposal and the stewardship of coastal and marine habitats. The problems are so huge and multifaceted that it is only by working together that we can make a difference.

We should not be afraid to take action. Next year, if you love the ocean, wear a blue heart and follow 12 simple ways to help save our seas:

- Stop littering our planet: reduce, reuse, recycle (especially plastic).
- Read labels on tuna cans. Buy only those products that respect marine life.
- Find out how and where fish at your local market is caught before you buy.
- Use unbleached or white toilet paper—colored paper contains dyes that pollute our water systems and, eventually, the ocean.
- Use phosphate-free washing powder, detergent and other cleaning agents.
- Don't take shells or other "souvenirs" from the beach.
- Pick up any rubbish you see and dispose properly.
- Avoid using water-polluting household chemicals. Instead use eco-friendly substitutes such as vinegar (an all-purpose cleaner) and sodium bicarbonate (a bathroom cleaner/mold remover).
- Report to authorities any illegal dumping or fishing activities you discover.
- Let your government know how you feel about issues affecting the marine environment. Write local and national officials or phone the newspapers.
- Draft your own Ocean Charter. (Member-countries of the IOC will have their own Ocean Charter which will be presented and adopted in 1998 as a highlight of the IYO.) Get people in your neighborhood to sign your Charter, then present it to your mayor or *barangay* (village) captain and request that it be displayed prominently in your municipal or barangay hall.

- Show you care. Wear a blue heart (lapel pin, pin, earrings, or necklaces) in 1998.

Transformational Communication: A Normative Approach to Environmental Education

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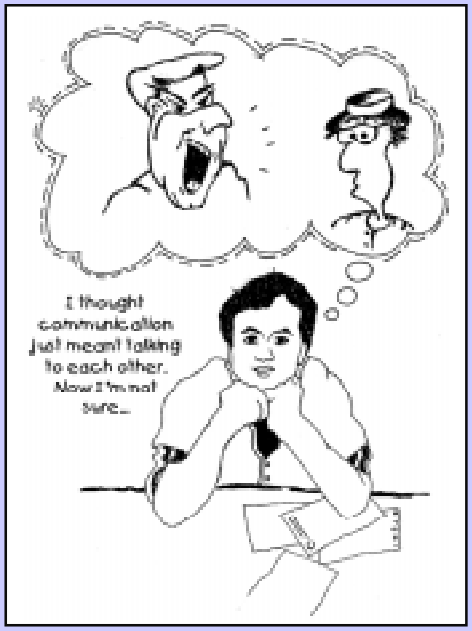
It has been said by national governments and donors alike in recent years that to effectively change the downward environmental trends in the Philippines and in Asia, we must see a paradigm shift in approach and type of assistance. Indeed, some assistance programs are purposively moving away from time-bound, pilot location-specific, material interventions to sustainable, strategic, non-material interventions. To be true to this shift in approach to environmental protection, information, education and communication (IEC) activities have to be consistent and respond to the observed inadequacies of conventional communication approaches used in earlier environmental programs.

The Failure of Environmental Communication

Program managers, funding agencies, even Department of Environment and Natural Resources cabinet undersecretaries of two administrations, believe that Philippine environmental communication programs in the past have been largely ineffective. Within the natural resources management program of the United States Agency for International Development, this observation has been the subject of a long standing dialogue between project officers, communication experts in the academe and IEC practitioners (Flor and Gomez 1993). The concerns regarding environmental communication can best be summarized in one question: With all its documented successes in agricultural and health programs, why does communication fail in environmental programs?

In 1993, Cecile Guidote-Alvarez of Earthsavers, an environmental group, expressed the need for "intelligent, sensitive, comprehensive and functional" environmental communication. She took issue in public affairs programs wherein millions are spent on advertising that does not connect with the



understanding of the fisherfolk or the farmer. She underscored the need to design a creative communication strategy and described as catastrophic the fact that media has not been used as an education tool *(in* Flor and Matulac 1994). This observation was echoed by Guerrero *et al*. (1994) who felt that environmental communication programs were not participatory enough.

The use of top-down communication techniques and the lack of participation certainly have a bearing on the effectiveness of communication undertakings. However, we suspect that there is a deeper, more fundamental explanation to this.

Modes of Program Communication

In 1992, Neil McKee categorized the modes of development communication into two: social marketing and social mobilization. Our experience, however, suggests four distinct modes: development support communication (DSC); information, education and communication; social marketing; and social mobilization. Although these modes are not mutually exclusive and for the most part overlap, particularly in their operationalization, they represent differing perspectives on program communication.

Development support communication, the oldest of these modes, is rooted in the Green Revolution thrusts of the fifties and the sixties being a direct offshoot of agricultural communications. Endorsed by the United Nations Development Programme-Food and Agriculture Organization and most international agricultural research institutions, it employs communication as supportive to the technical activities of an organization or a project. DSC units are responsible for the production of newsletters, brochures, leaflets, posters and instructional materials in support of other program components and activities. Up to this day, DSC divisions exist in most international agricultural agencies such as the International Rice Research Institute.

Conventional IEC, on the other hand, is based on the experiences of the health and population sector in the sixties and seventies. This mode contends that communication is not merely supportive to technical interventions but are legitimate social interventions in themselves. In this mode, information is considered as a primary resource; education, be it formal or nonformal, is acknowledged as one of the most viable social interventions; and communication media is recognized as the leading force in setting social agenda. Hence, information, education and communication activities are no longer considered fully dependent on the activities and priorities of other program components.

Social marketing began in the eighties as an offshoot of private sector (i.e., advertising industry) involvement in health and population IEC campaigns. As in the advertising model, the thrust is behavioral and planning is top-down for the most part. Social mobilization, a product of the conscientization school of thought in South America, grew in the nineties as the anti-thesis of social marketing because of its focus on collective action and its bottom-up, participatory approach. Social mobilization is the mode of choice for the United Nations Educational, Scientific and Cultural Organization's literacy programs and the United Nations International Children's Educational Fund's nutrition programs.

Communication in Complex Systems

As described above, most program communication strategies are based on experiences in the agricultural, population and health sectors. The techniques associated with the IEC and social marketing modes generally employ the behavioral approach, i.e., the identification and promotion of specific behaviors such as the adoption of new agricultural technology; the use of contraceptive methods; or quitting a bad habit (smoking, etc.). Using this approach within the less complex contexts of agricultural, population and health programs posed no problems to communication experts.

The case is different, however, in the environmental sector. With its array of biogeophysical, institutional and socio-economic concerns, environmental programs operate within a complex, dynamic or chaos system characterized by unpredictability and change within its boundaries. In other words, environmental programs possess a higher order of complexity than agricultural, population and health programs thus, requiring a set of higher-order communication interventions.

The CRMP Environmental Communication Paradigm

Given the above considerations and the need for a set of higher-order interventions, environmental programs such as the Coastal Resource Management Project must adopt a wider, more comprehensive and holistic paradigm for environmental communication in its operational and substantive aspects.

They should employ an operational framework that integrates the major communication

modes applied to development undertakings. Such an integration will produce synergy and contribute to sustainability and strategic expansion. This operational framework is shown in Figure 1 with four converging circles representing the four modes. The framework also provides for an imaginary line highlighting the cultural dimension in these approaches.

A program must also employ a substantive communication framework that focuses on normative (value-based) instead of behavioral change. The behavioral approach works well in agricultural, population and health programs but somehow falls short of expectations when applied to environmental programs. There is an infinite array of environmental-friendly and non-environmental-friendly behaviors that may be identified. Applying specific interventions for each behavior in this endless list is not realistic and focusing on a given few might be fragmented and ineffective from a holistic perspective. Hence, aside from specific behaviors, we elected to focus on norms or values that determine behaviors.

The normative approach suggests three substantive areas of focus: environmental literacy; environmental ethics; and environmental advocacy. These three areas reinforce one another and would lead to sustained and consistent changes in our social norms and consequently in our environmental behavior. Figure 2 gives a representation of this substantive framework.

FIGURE 1. OPERATIONAL FRAMEWORK.

FIGURE 2. SUBSTANTIVE FRAMEWORK.

These shifts in operational and substantive frameworks mean a larger, more significant role for environmental communication which is to **trigger large-scale social transformation**.

Transformational Communication

"Transform yourself, transform society," so says a popular poster in the seventies. Transformation is indeed a function of individual and social change. A landmark study of basic Christian communities conducted by the Asian Social Institute gives three levels of community development impetus: individual, social, and transformational. It is this third and highest order of purpose that we feel is most applicable to environmental programs operating within complex systems.

Features of Transformational Communication. How will normative changes be achieved? In other words, how exactly is transformational communication operationalized?

At this point, we can say with certainty that transformational communication should have the following features:

Multi-level/Multi-sectoral. Environmental communication should be done at all levels of society: individual, community, and national. Early on, the motto adopted for transformational communication is "*Individual initiative, collective responsibility*" (GreenCOM 1997). It should also involve as many sectors as possible: the Church; business and industry; schools; law enforcement agencies and the military; the media; local government units; nongovernment organizations and people's organizations; women; and the youth. It should focus on institutional (network) development

and capacity building to achieve sustainability.

Process-oriented and Synergy-driven. Changes in norms occur through social processes involving education, collective pressure, shifts in worldview and others. The communicator assumes a facilitative and catalytic role in these processes through social agenda setting, shaping of public opinion, and community mobilization. Oftentimes, these social processes assume a momentum of its own inherent to the dynamics within complex systems.

Strategic. Although the intention is to involve as many sectors as possible, logistical limitations dictate that environmental communication should target specific key players within these social processes that would lead to the greatest impact at the shortest amount of time. These key players are referred to as pressure points or nodes. This can be operationalized by focusing on policy makers and corporate leaders, educational institutions as well as communities with the end view of developing a cadre of leaders that would form the critical mass for the revolution required in coastal resource management. As an illustration, Figure 3 gives a transformational communication network and process configuration.

Summary

In summary, transformation communication focuses on institutional (network) development and capacity building to achieve sustainability. Likewise, it does not only aim for concrete behavioral targets but for the initiation of social processes. Furthermore, these social processes should assume a momentum for expansion, a life of their own, so to speak. Finally, the communication approach should be strategic, identifying pressure points or nodes within these social processes that would lead to the greatest impact in the shortest time.

Observers say that environmentalism should have the fervor of a religious movement in order to succeed. Environmental communication should, at the very least, adopt this transformational feature of religious movements, changing social norms, in order to make a lasting impact.

[This approach, transformational communication, is being applied by the Coastal Resource Management Project of the United States Agency for International Development. It will be very instructive to monitor results as new ground is broken in this emerging field. Editor]

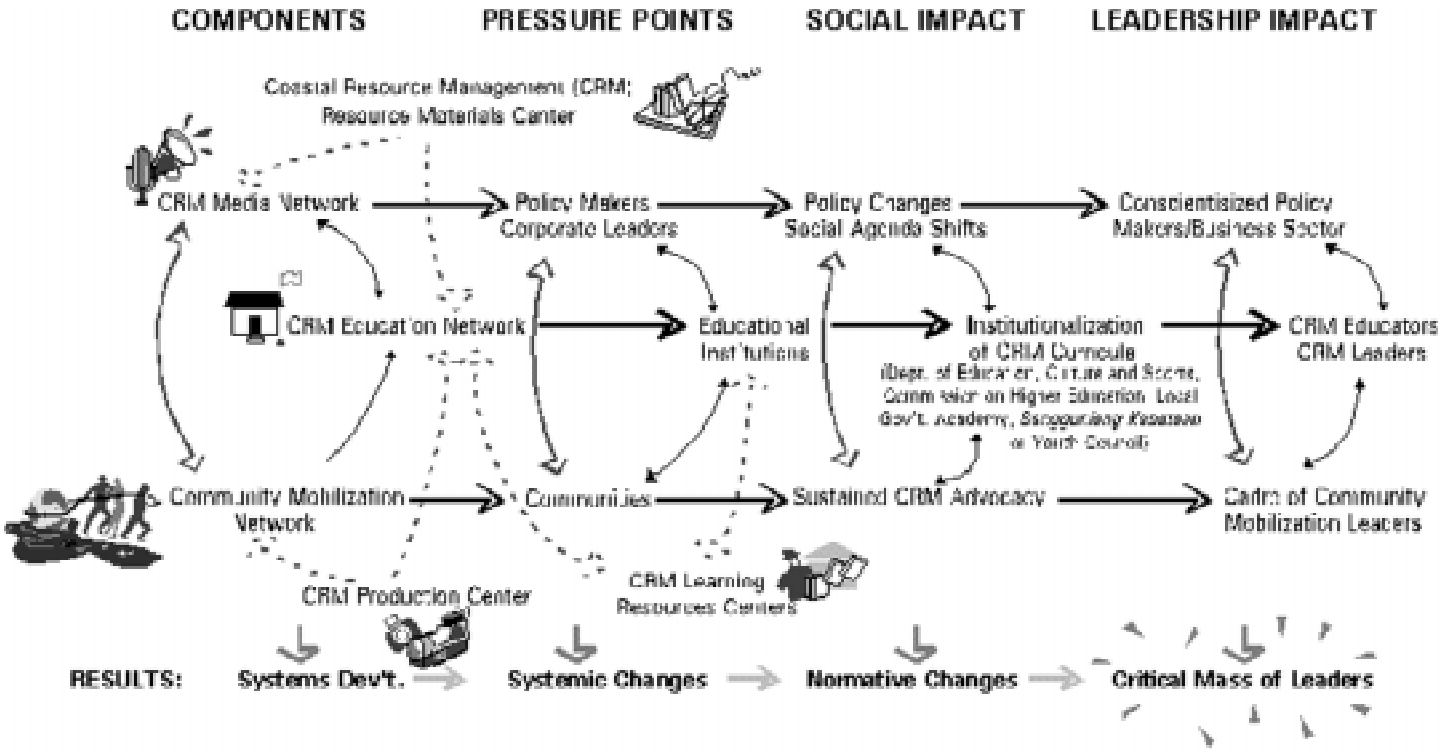


FIGURE 3. TRANSFORMATIONAL COMMUNICATION NETWORK AND PROCESS CONFIGURATION.

Debunking Myths About IEC

Communication is a pervasive phenomenon that we relate with daily, thus, *everybody is an IEC expert.* Unfortunately, this universal expertise may have been misled by a number of myths.

Myth: IEC is merely supportive of other project components or project interventions.

Fact: Communication is a legitimate intervention in itself. In fact, many would argue that in projects that aim for long-term behavior change (i.e., population control, social forestry, and even resource management), communication becomes the main intervention. Some would even go as far as saying that the development process is a communication process.

Myth: IEC means communication media or materials.

Fact: Communication is a process. In a working environment ruled by management audits and performance indicators, it is all very convenient to focus on concrete deliverables and outputs such as posters, leaflets, TV spots or press releases. But the whole point of having an IEC component is to effectively tap the spontaneous and dynamic societal process that brings about social change. We can facilitate, but not substitute, this process with communication media and materials.

Myth: The development project, program or organization is the source of information.

Fact: We cannot really determine where communication begins and ends nor can we accurately identify the original source and the ultimate receiver. We conduct needs assessments, rapid rural appraisals, and studies on knowledge, attitudes and practices wherein our beneficiaries become the main source of information. The development process may be considered as an ongoing dialogue between the project, program or organization and the beneficiaries, which leads to mutual understanding on what measures to take, and, it is hoped, to social action and ultimately, social change.

Myth: IEC is not difficult. It's a relatively minor job.

Fact: IEC is far from simple. It requires skills in all aspects of the production process, from planning, visualization and writing to artwork execution and pre-testing. The really difficult part of IEC, however, is trying to accommodate the perceived needs of people who hold different opinions and have different tastes—from your superior, to the subject matter specialist and, finally, to the user.

Myth: If the project fails, IEC is to blame. Actually, this myth goes around in a more positive form. " My activity flopped because I had no IEC materials," "The project failed because it lacked IEC," "IEC is the key to our organization's success."

Fact: IEC is not the panacea for the problems of development projects, programs or organizations. Nonetheless, people's high expectations are indicative of an increasing appreciation of communication as a social intervention tool.

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Philippine Fisheries Code: Some Features and Prospects

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Two Bills in Congress

Questions pertaining to the fisheries code are manifold: Will it be passed? Which version? Which provisions will be maintained? Who will stand to benefit?

Two versions of the Fisheries Code have emerged from the 10th congress. From the Upper House is Senate Bill No. (SN) 1708 entitled, "An Act Providing for the Management and Conservation of the Fisheries and Aquatic Resources, Creating for the Purpose the Department of Fisheries, Integrating All Laws Pertinent thereto, Appropriating Funds therefore, and for Other Purposes." This bill consolidates 13 bills that dealt with specific items such as a) conservation and management of seaweeds and aquatic invertebrates; b) intensification of production and provision of post-harvest techniques for fish, shellfish and marine life; c) repeal of laws, particularly those referring to coral resources; d) banning of the exportation of raw sea shells and fresh seedlings of seaweeds; and e) institutional strengthening. Three of these 13 bills deal with the codification of existing fishery laws and were authored by Senators Macapagal and Shahani. Senators Sotto III, Romulo, Maceda, Osmeña III, Macapagal, Mercado, Shahani and Alvarez are the authors of SN 1708.

SN 1708 was passed last August 5, 1997 upon the Third and Final Reading after having gone through a period of amendments and interpellation beginning in March 1997. The title of the bill as approved is "An Act Providing for the Development, Management and Conservation of the Fisheries and Aquatic Resources, Renaming for the Purpose the Department of Agriculture as Department of Agriculture and Fisheries, Integrating All Laws Pertinent thereto, Appropriating Funds therefore, and for Other Purposes."

From the Congress is House Bill (HB) No. 7366 entitled, "An Act to Codify All Laws on Fisheries and Aquatic Resources," which consolidates seven versions dealing mostly with the codification of laws on fisheries and aquatic resources and the democratization of its utilization and management. HB 7366's main sponsor is Congressman Jose T. Villarosa who chairs the House Special Committee on the Fisheries Industry composed of Congresswoman Acosta, Congressmen Albano, Dragon, Abad, and Tañada and members of the special committee on the fisheries industry.

HB 7366 is presently undergoing the period of interpellation, a procedure in legislative bodies wherein an official(s) is asked to explain a bill or a policy.

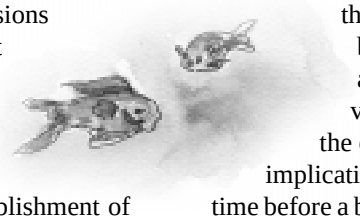
The Senate version recognizes the spread damage of aquatic resources, low aquaculture

productivity, under utilization of the offshore and the Exclusive Economic Zone, overexploitation of the near-shore coastal resources and poverty among municipal fisherfolk. Likewise, the rationale invoked by the House in said sponsorship is "the continued deterioration of the marine ecology and the resulting reduction in the stocks of marine resources such as fish, crustacean, and seaweed." Both versions support the codification, amendment and update of existing laws to reflect "recent changes in our marine environment and economics."

Features of the Fisheries Code

Both Senate and House versions contain significant improvements from Presidential Decree (PD) 704 in the area of resource management and conservation and of assigning use rights and privileges to Filipino citizens. PD 704 has been used as the framework for fishery management for two decades now. It is development-oriented with policy statements emphasizing the "acceleration and promotion of the integrated development of the fishery industry" and the industry being a "preferred area of investment." While it cannot be said that conservation and protection initiatives were ignored in PD 704, such initiatives were limited in scope—mostly closed seasons, fish sanctuaries, illegal fishing and exportation of *bangus* (milkfish) fry—and did not have the implementing guidelines on which to operate. In contrast, both senate and house versions invoke the framework of sustainable development, taking note of maximum sustainable yield, total allowable catch and fishing effort limitations. The Senate version, moreover, suggests that fishpond lease agreements (FLA) and license fees for commercial fishing vessels be based on economic rent, a concept espoused by fisheries scientists worldwide, as a resource management criteria.

PD 704 is not just silent over who should have exclusive claim to the country's marine resources but, in fact, allows foreign equity of up to 40%, the limit allowed by the 1971 Philippine Constitution. The Senate and House versions state that the country's fishery resources are for the exclusive use and enjoyment of Filipinos. The Senate and House versions provide priority to municipal fisherfolk and their organizations/cooperatives (depending on definition) in the exploitation of municipal and demarcated fishery areas. Moreover, both versions bestow management rights to the people who directly use the resource and, in fact, upholds and encourages the establishment of Resource Management Councils from the *barangay* (village) to the national level.



Another noteworthy improvement from PD 704, although espoused solely by the senate version, is the concept of integrated development. This is stated in the Declaration of Policy, Sec. 2(f), and Sec. 13, *Permits for environmental impact projects*, which provides for the incorporation of externalities induced by upland and terrestrial activities on fisheries. Sec. 17 further states that "management of contiguous fishery resources such as bays and gulf, which straddle several municipalities or provinces, shall be done in an integrated manner, and would not be based on political subdivisions of municipal waters."

Likewise, the attempt to codify all laws relevant to fisheries will improve and streamline responsibilities towards fisheries management and enforcement.

The Senate and House bills contain provisions that various stakeholder groups consider inimical to their welfare. These groups include small fisherfolk, commercial fishers, academe, peoples' organizations and non-government organizations and government institutions. These stakeholders have varied agenda. Thus, specific provisions that tend to favor one sector prove to be detrimental to another. The points of contention between the house and senate versions are discussed here not just to highlight similarities or differences but also in relation to the legislative procedure. This process highlights the system of review in both Houses. Thus, if a provision in one version runs counter to the other, this would have implications on the length of time before a bill is finally passed, or if the bill is passed at all. The "critical" provisions of the proposed Fisheries Code from both houses of Congress are as follows:

SN 1708 and HB 7366 maintains the definition of municipal fishing as those below three gross tons or those not requiring the use of fishing vessels. Both versions maintain that only municipal fishing is to be conducted in the seven kilometer area and in all bays (The House version assigns responsibility to the Authority to determine which bays to close to all commercial fishing.).

A critical feature of both versions is the clarification of jurisdiction over the 7 to 15 km area of municipal waters (see box on page 13). The laws that presently govern municipal waters as defined by the Local Government Code (LGC), include PD 704 (as amended

PROVISIONS	SENATE VERSION	HOUSE VERSION
use of municipal waters	SN 1708 provides for the LGU to authorize or permit small and medium commercial fishing vessels to operate within 7 to 15 km, provided that: a) there will be no commercial fishing in municipal waters with depth less than 7 fathoms; b) fishing activities use methods and gears that are consistent with national policies; c) prior consultation with the municipal or city FARMC has been conducted; and d) applicant vessels as well as the ship owner, employer, captain and crew have not violated this Code, environmental laws and other related laws.	HB 7366 provides for the municipal or city government, acting through its local chief executive and acting pursuant to an appropriate ordinance, to authorize or permit small scale commercial fishing vessels and gears to operate beyond 7 up to 15 km from the shoreline of municipal waters as defined herein, provided that all the following are met: a) such fishing activity is determined to be consistent with national policies set by the Administration (Philippine Fisheries Administration) and b) prior consultation with the local FARMC has been conducted.
fishpond lease agreements	SN 1708 provides for areas leased for fishpond purposes to be no more than 25 hectares.	HB 7366 provides for areas leased for fishpond purposes to be no more than 50 hectares for individuals and 500 hectares for corporations or fisherfolk organizations.
institutional arrangements	SN 1708 proposes the renaming of the Department of Agriculture to that of Department of Agriculture and Fisheries with an Undersecretary for Fisheries.	HB 7366 proposes the creation of a Philippine Fisheries Administration attached to the Office of the President.

by PD 1015), Letter of Instruction 1328, Fishery Administrative Order (FAO) 156 and FAO 164 which specify the allowable types of fishing activities within the 7 km and 7 fathom-depth area. These laws, when interpreted with the LGC, leave a "vacuum" as to the management of the area not otherwise covered, i.e., 7 to 15 km. Presently, this controversy has sparked a flurry of legal and policy interpretations on the right of the local government units (LGU) to allow or disallow commercial fishing, in general, in these disputed waters.

The positive aspect of both versions of the proposed Code is its consistency with the LGC as it assigns to the local chief executive full jurisdiction over municipal waters. Moreover, enough safeguards have been installed to minimize discretionary and abusive regimes, such as prior consultations with Fisheries and Aquatic Resource Management Councils (FARMC) and closure of bays. Nevertheless, the small scale fishery sector consider such safeguards as futile especially in situations where local chief executives or their cohorts are themselves the beneficiaries of commercial fishing enterprises. The long and lasting solution is vigilance on the part of people's organizations such as FARMCs and a wise electorate.

Both versions provide for the granting of FLAs to existing fishpond operators upon expiration of said FLA. The difference lies in the permissible area which is less than or equal to 25 hectares, for the Senate version, and 50 hectares for individuals and 500 hectares for corporations or *status quo* (as

provided for by PD 704), for the House version. The Senate version also provides that the assignment of priority rights to existing FLA holders be limited to the first 25 hectares only (Sections 35 and 36).

The argument against the common provision is the violation of preferential treatment to fisherfolk and their cooperatives. Likewise, the issue of inter-generational equity may be invoked because the privilege to use the resource, for which the initial lease already constitutes 25 years, excludes the present non-users. It can thus be argued that present FLA holders have already benefitted from the use of this resource and that it is but fair to afford other parties to avail of the benefits for the next 25 year-lease period. On the other hand, granting the privilege to present holders may argue on the basis of economic efficiency. Current FLA holders know the production and marketing strategies while new entrants would have to undergo a "learning" process.

The positive aspect of both versions of the proposed Code is its consistency with the LGC as it assigns to the local chief executive full jurisdiction over municipal waters.

Similarly, the difference in permissible hectarage is a reflection of equity and efficiency considerations.

The initial proposal of the Senate version was the creation of a Department of Fisheries, separate and distinct from the Department of Agriculture (DA). However, the creation of a new department is perceived to be unresponsive to the urgent problems of fisheries overexploitation. The proposal was therefore watered down in its present and approved version, to that of an attached department to the DA. Nevertheless, the Senate version involves the reconstitution of the Bureau of Fisheries and Aquatic Resources into a line bureau with regional, provincial and municipal offices established.

The House version proposes the creation of the Philippine Fisheries Administration with regulatory and supervisory functions, attached to the Office of the President. Meanwhile, a parallel entity, the National Fisheries and Aquatic Resources Management Board, is proposed to perform corporate as well as governing and policy making responsibilities.

Among the various points of contention of the two Houses of Congress, that pertaining to institutions is the least problematic and controversial, with impending solutions already in sight.

Prospects for the Fisheries Code

The past. Earlier versions of the fisheries code have been deliberated upon during the eighth and ninth congress with Sen. Agapito Aquino and Sen. Santanina Rasul, acting as main sponsors, respectively. Both bills have been shelved, archived and refiled.

Thus far, three landmark legislations pertaining to the environment have been passed by the eighth and ninth congress, a total of six years. These include Republic Act (RA) 7942, The Philippine Mining Act; RA 7076, The Small-scale Mining Act; and RA 7586, The National Integrated Protected Areas System Law.

What lies ahead. The Senate version was passed on its Third Reading, August 5, 1997. The House version is still undergoing a period of interpellation, i.e, Second Reading. After the Third Reading, both versions will then be referred to the bicameral conference committee, known candidly as the "Third Congress." This committee harmonizes conflicting provisions of the two versions. Thereafter, the conference committee report is approved by both chambers and is submitted to the President for approval.

Whether a version of the Code will be passed soon is not clear. Nonetheless, that the two versions are converging on certain issues and appear to be more and more parallel to each other is positive. With the exception of the proposed institutional set-up, the earlier points of contention appear to have been ironed out.

Acknowledgements

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Planning for Integrated Coastal Management: What Are the Steps?

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What is a Plan?

Why do we always talk about planning? Why can't we go directly to required actions? In practice, whenever we want to undertake any meaningful action to effect change in human behavior, the state of our environment, or other results, we have to make plans. In short, planning is the process of organizing our ideas and resources to make things happen. A plan expresses a detailed program of action. It is orderly and logical. The process of planning involves arranging actions so that they add up to a desired result. Ultimately, plans help us to devise projects to realize achievement, both simple and complex. Plans are a prerequisite to any form of management.

Integrated Coastal Management Plans

Integrated coastal management (ICM) is really a large set of goals and objectives we set out to achieve. ICM includes many activities—often complex ones—which are carefully arranged in plans. A plan can arrange actions to solve very specific problems such as the degradation of a small mangrove forest. Or, a plan may organize all the required actions to manage the coastal resources in one municipality covering 100 kilometers or more of coastline. A plan can layout a work schedule for a project team for only three months. Or, a plan can set out a series of goals, objectives, policies, strategies and actions which involve hundreds of people and their work for over five years. Plans for ICM are inherently variable depending on their overall intended purpose. They change with time as they evolve. But without good plans, we cannot easily move ahead.

There is always a trade off between short and long term planning and action and indeed, differing opinions exist among persons who have biases for one or the other. For example, the politician of two to four years duration wants plans which produce almost immediate results. He or she wants to increase fishery production at all costs and show tangible monetary benefits for his constituents. The politician wants livelihood opportunities which produce quickly. This may have to be done at the cost of longer term production and stability of the natural coastal resource base. On the other hand, the planner for sustainable development will have another bias. He or she will prefer to develop plans which ensure long term protection of environmental resources and natural production, because he/she knows that short term gains often cause long term losses. This is very evident in the Philippines today with respect to the state of mangrove forests

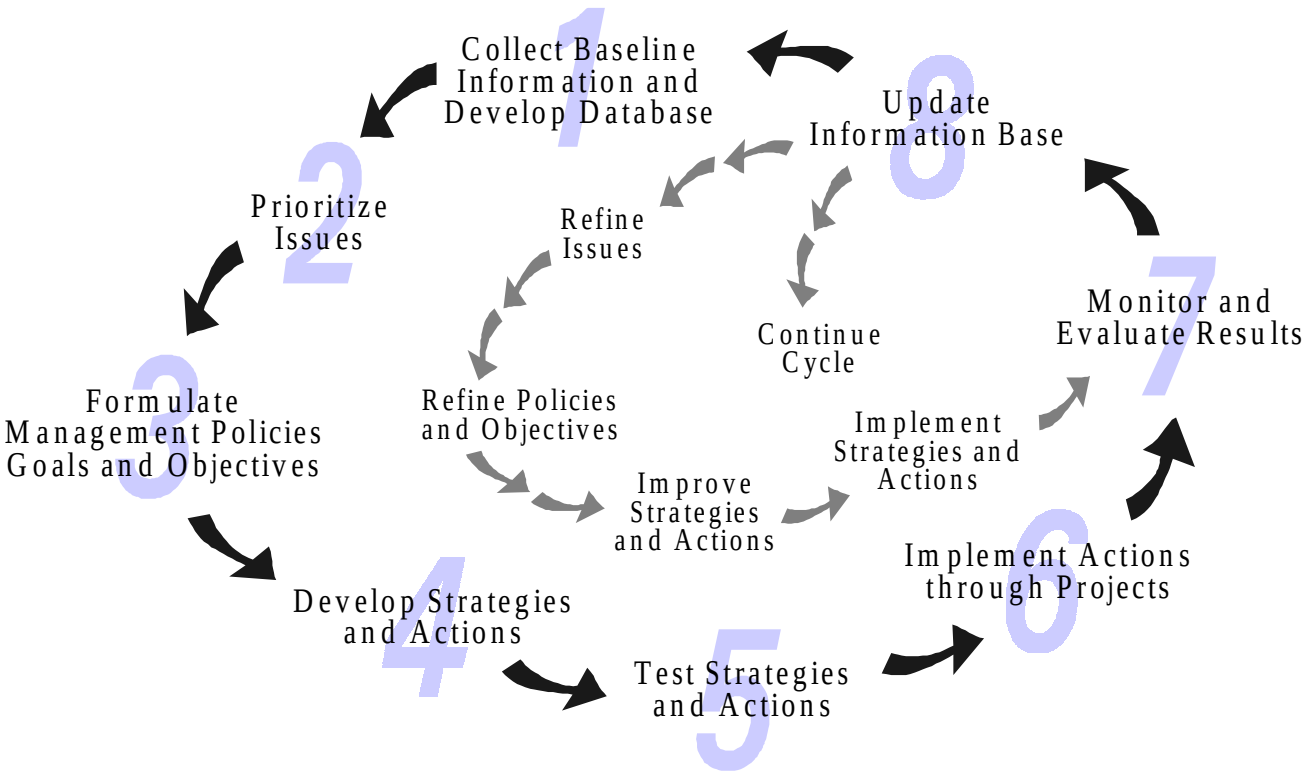

FIGURE 1. BASIC PLANNING AND IMPLEMENTATION CYCLE.

which are not nearly as productive as 50 years ago. Plans and their time horizon can make the difference in outcome. But, since people make plans, their own perspectives and biases will inherently affect the contents and results of the plans!

Regardless of the size, scope and complexity of a plan, there is a planning process and certain basic ingredients. Various programs in the Philippines and abroad have, through experience, helped us determine what is essential in the planning process to achieve results in both the short and long term.

Basic Planning Process and Contents

Figure 1 shows us a basic planning and implementation cycle. All plans and management evolve from an information base. The better quality the information, the more realistic the plan. Plans made from hearsay are very unreliable and will lead people astray and cause damage. Thus, obtaining reliable information is the first step in planning. The question then arises as to how much information and what sources we should utilize. For ICM planning, we usually start with secondary information and then go to field assessments and interviews with people to collect primary data. The problem is that this is time consuming and expensive so we have to decide what is essential for good ICM planning. This often involves some debate. Good planning for fisheries management, as an example, usually requires data on fish stock status and ecology. This can require one or more years of costly field research. Short term ICM planners usually do not want to wait for this input. But, in the long run, reliable data of this kind is essential to plan for fisheries management. Of course if we know that a local fishery is already overfished, then our task is easier and we can plan only for the conservation side of management—not further

exploitation. But knowing that fisheries are already overexploited is not so easy as it seems! This is because there are usually many different fisheries to consider!

The basic planning cycle continues to formulate plans once good information is available. Plans need a focus so that they do not attempt to solve too many problems at once. Thus, identifying management issues and deciding on their level of importance are essential first steps in determining what comes first. Issue analysis and prioritization helps us decide where to start. If our reef is being blasted to pieces and the reef is the major resource of a coastal area, it is easy to prioritize the issue of blast fishing. But as we begin to analyze contributing causes to blast fishing, we will probably realize that the task is not as easy as it first appears. The blast fishers may come from afar which highlights the need for local law enforcement. But, sometimes the blast fishers come from the area and claim poverty and no alternative sources of income. In this case, the solution may involve new jobs, education, peer pressure and other interventions all of which complicate the plan development. Nevertheless, the plan objective can still be to stop blast fishing but the various strategies and actions may be more than simple law enforcement. The planning process will help us sort out the actions needed, their timing, their level of support and who will implement them.

Plans need a focus so that they do not attempt to solve too many problems at once. Thus, identifying management issues and deciding on their level of importance are essential first steps.

The planning cycle is not simply a linear and sequential process. It can follow a variable path and some things can come before others. But, the way it is presented in Figure 1, there is a sequence. The reason is that for any first time plan, certain pieces are essential—otherwise it is not a plan! After issues and their analysis comes the plan goals and objectives. These are easy once the issues are determined because an objective for the issue of blast fishing is to stop blast fishing—simple. Well, it is not quite so simple but you get the idea. An important criterion in deciding the objectives is whether they are measurable and doable. Simply stopping blast fishing may sound good but it may not be achievable as such. Thus the objective should be more specific. For example, our objective could be: "to stop blast fishing in the area adjacent to barangay x and within one kilometer of the marine sanctuary y." There are many permutations on how to state an objective but in the end, it must be possible to achieve within the time frame of the plan.

Once objectives are decided, policies, strategies and actions follow. Without going into definitions of all these, the key thing to remember is that objectives must translate into meaningful actions. But a simple long list of actions will not do the job. Rather, we need policies to guide our actions in general. And, we need strategies. A strategy can be the setting up of a marine protected area, zoning of the resource area, organizing management committees and educating a community group among many other possibilities. The actions will be the particular steps to implement a given strategy. This sounds easy but believe me, it can get complicated quickly! Actions, once decided require people, money, time, organization, communication—and more—to implement. Thus, the need for a detailed and logical plan.

A good plan makes implementation easy because it is all laid out. And a good plan is not simply a piece of paper. Rather, it represents experience, testing and ongoing actions which are working in the field. Plans evolve over time through various trials and improvements. Plans are intended to be implemented and the sooner implementation starts during the planning process, the more likely that the plan will be practical and acceptable. Planning for ICM implies a high level of participation of all stakeholders. This participation is not only in planning but in implementation as well; and the sooner and more effectively the two merge, the better the plan.

This brings us to the point of monitoring and evaluation. All our efforts are ultimately tested in the field with real people and actions. We hope to achieve certain results such as improved quality of our

Feedback to appropriate phase

Phase	Activities and Outputs	Technical Assistance Roles of Non-Government Organizations, Academe, Donors and National Government	Roles of Community, Local Government and Stakeholders
1. Program preparation	• Determine boundaries and scope • Make workplans/budgets • Assign personnel • Secure consensus on overall approach	• Prepare workplans • Formulate working agreements • Contract staff • Train staff • Facilitate consensus on design	• Enter into memoranda of agreement • Participate in discussion • Communicate needs and potential roles
2. Secondary information gathering	• Compile existing maps, reports, data • Interview information sources • Compile existing laws, agreements, plans • Review other sources of information	• Locate sources of information • Compile information in useful form • Coordinate activities	• Provide information • Assist to compile information • Begin to develop information storage and retrieval system
3. Field assessment/ study: Participatory Coastal Resource Assessment (PCRA) and other research	• Train practitioners • Conduct PCRA mapping and data collection • Contract special research studies on fish stock assessment, habitat condition, water quality, enterprise and others	• Train practitioners • Facilitate PCRA • Conduct specialized research • Analyze research data • Make results available	• Conduct PCRA with technical assistance • Participate in special research and data collection • Assist to analyze data • Provide inputs to mapping
4. Database and profile development	• Set up data storage and retrieval system • Compile coastal environmental profile • Use profile as planning base • Refine boundaries and further research needs	• Determine data storage site, personnel • Write profile • Distribute profile • Facilitate discussions on boundaries and research needs	• Provide information • Assist with profile analysis • Use profile for planning • Decide on boundary demarcation
5. Prioritize issues and analyze causes	• Conduct community and municipal-based planning sessions • Develop issue tree • Prioritize issues for management • Determine causes of issues	• Facilitate process • Interject outside perspectives, research findings, policies, etc. • Help translate issues into causes	• Provide basic policies • Provide major inputs to plan • Build consensus among community • LGU support to planning process
6. Policy and plan formulation	• Conduct planning workshops to determine objectives, strategies and actions • Determine clearly stated goals, objectives and indicators • Interagency coordination • Determine composition of management body • Initiate preliminary plan implementation	• Facilitate planning process • Provide technical guidance • Assist to set up management bodies	• Provide basic policies • Provide major inputs to plan • Build consensus among community • LGU support to planning process
7. Plan/project implementation	• Design pilot projects • Test projects • Formalize and set up management council • Secure support as required • Increase implementation effort	• Facilitate initial implementation • Provide seed funding • Provide technical guidance • Conduct training course as required	• Take full responsibility • Participate in implementation • Provide local pesonnel
8. Monitoring and evaluation	• Train monitoring and evaluation team • Monitor environment and ICM process and feeback to database and plan • Evaluate program results and feedback to plan	• Assist to train LGU personnel • Assist to analyze data • Assist to set up sustainable system	• Collect data • Use data to refine plan and update database • Participate in process • Take responsibility

FIGURE 2. PHASES, ACTIVTIES AND PARTICIPANT ROLES IN A COASTAL MANAGEMENT PLANNING PROCESS.

coral reef, mangrove forest or water. We must monitor the results to see if this is occurring. And, we must monitor and evaluate the effectiveness of the plan design and its implementation. Otherwise, we will never know if we are creating the changes we desire through the most efficient and effective means—the plan.

Once we reach the point of being able to monitor and evaluate our results, the planning cycle becomes less rigid. The findings of monitoring can feed into the cycle at the data base and profiling stage, at the plan objectives and policy stage or simply in refining the strategies and actions. The point is that as we learn from monitoring and evaluation, we can improve our plan, its ingredients and the effectiveness of implementation.

Outputs and Responsibilities

Another way to look at the planning process is through the normal activities involved to complete each planning phase, the important outputs and who is responsible. Figure 2 breaks the planning cycle down in eight phases with associated activities and the roles of various actors in the planning and implementation process.

Responsible individuals, groups or organizations make and implement plans. It is essential to be clear who is responsible for what action. In the developing world of the Philippines, ICM is typically driven by outside organizations which provide technical assistance and support in various forms to the more localized and ultimately responsible entities of the local government, local community groups, non-government organizations and people's organizations. The dichotomy between the outside technical assistance groups which often include national government, and the community level stakeholders, needs to remain transparent and clearly stated in ICM plans. It is unlikely for ICM to develop effectively without some outside facilitation, but the LGUs and communities must fully take the reins at some point during the planning and implementation phases, for the ICM process to be sustainable. Thus, we always have to keep in mind to what degree the real, on the ground, stakeholders are taking responsibility and are able to fully comprehend and continue the planning and implementation process. This is the ultimate test of success in any ICM program and plan.

It is essential to be clear who is responsible for what action.

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All in a Day's Work

162,300 kilograms. That's the amount of trash collected from beaches by some 30,000 volunteers who participated in last September's International Coastal Cleanup Day (ICC). Participation cut across many sectors — local government units, line agencies, the Philippine Navy, the Philippine Coast Guard and its civilian arm, the Philippine Coast Guard Auxiliary, schools, non-governmental organizations, corporate and business groups, and community residents were all represented.

"The message that the ICC sought to bring across—that garbage is everybody's problem and responsibility—seemed to strike a responsive chord among the various sectors," noted Rebecca Pestaño-Smith, information education and communication coordinator of the Coastal Resource Management Project (CRMP), which facilitated the cleanup in several areas in the Visayas and Mindanao as well as in San Vicente, Palawan and Infanta, Quezon. A major outcome of the ICC was the institutionalization of the coastal cleanup by the governments of Lapu-lapu City and Cebu City, which have adopted measures to include coastal areas in their clean and green programs.

The event was part of a yearly cleanup campaign coordinated internationally by the Washington-based Center for Marine Conservation (CMC) and in the Philippines by the non-governmental organization International Marinelife Alliance Philippines. Data from the Philippine cleanup will be sent to CMC and will be included in a database to be analyzed by scientists in their search for a solution to the world's marine pollution problem.

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Reclaiming the Island Reefs

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Luís de la Concepción III tried to get out of the family "business". The son of fisherfolk, he moved out of his small village in the central Philippines province of Negros Occidental to try his luck in Manila, the country's capital. After finding life just as tough in the big city, de la Concepción is now back in Caliling where local legend says giants roamed in the past.

He has taken up fishing once again but often still finds himself with very little to show for his efforts. Using simple tools like multiple hooks and lines and nets and sharing his catch with the owner of the boat, fishers on a good day gets a little less than $2 (60 pesos) and on a bad day less than 50 cents (15 pesos). Harsh weather means not going out to the sea.

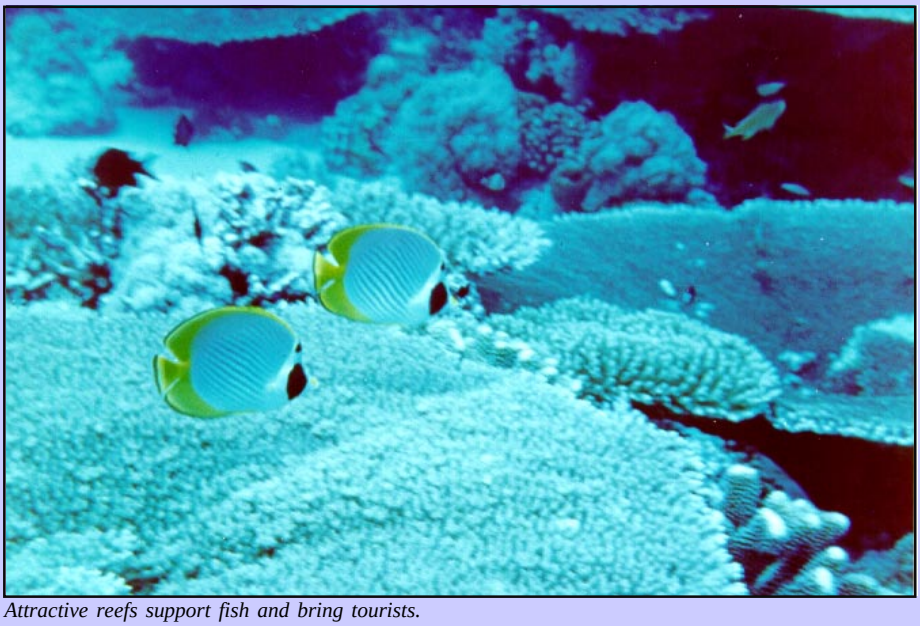
Things have not always been that bad for the local fishers. But the unwise exploitation of marine resources over the years has taken its toll. Ham Chua, President of Calaogao Marginal Fishers Association (CAMAFA), said illegal methods—including dynamite, cyanide, natural poisons, electrical current—were used before, causing untold damage to the reefs and marine resources. Fish eggs were collected and mangrove trees were used as Christmas decorations.

Chua said when the current conservation efforts in Caliling started sometime in 1994, "Only 32 per cent of coral reefs were left not only due to illegal fishing but also because of soil erosion."

This situation was not unique to the Negros village. By 1991, experts were reporting that about 70% of the Philippines' coral reefs were in poor or, at best, fair condition. Excellent reefs comprised only 5% of the estimated total of 27,000 square kilometers. That is indeed a terrible state of affairs for a country which, with some 7,100 islands, has a shoreline longer than the continental United States.

With up to 25% of the country's total fish catch associated with coral reefs and with fish providing more than 50% of the Filipinos' animal protein intake, there was compelling reason to act. Government agencies and non-government organizations (NGO) have both taken steps to solve the problem. But even more significant is the growing trend among local communities to take the initiative in restoring and conserving their natural resources (see next article).

What is happening in Caliling now is just one of the latest initiatives by a community to



Attractive reefs support fish and bring tourists.

manage its resources. The community has already succeeded in getting the Cauayan Municipal Board to declare some 200 hectares of the Hulaohulao (the name of another giant) reef a fish sanctuary. CAMAFA, which has some 50 members, is reforesting the uplands, rehabilitating the watershed, replanting mangroves, carefully policing Caliling's coastlines and building a boat to chase illegal fishers away. It has also launched alternative livelihood activities to help raise members' incomes.

Caliling took its cue from a much-admired initiative on the other side of the island of Negros. In the eastern part of the two-province island, Silliman University, which is based in Negros Oriental's capital city of Dumaguete, has succeeded in getting people to recognize and act on the need to protect and preserve their coral reefs and marine resources.

Getting people's cooperation was not easy. Dr. Angel Alcala, former Silliman president and former Secretary of the Department of Environment and Natural resources, said: "The most difficult problem… is to convince the hungry communities (of Caliling) to protect their resources… People have a tendency to cut mangroves or remove corals because of ignorance on the roles of environment in ensuring bountiful harvests."

Alcala, 1992 winner of Asia's prestigious Ramon Magsaysay Award in Public Service for his pioneering work in the rehabilitation of the Philippine coral reefs, talked about such things as how a good coral reef produces 25 tons of fish per square kilometer annually while a destroyed reef yields less than 5 tons. But lectures could only go so far. As another Silliman faculty member observed, "Inherent in fisherfolk is the need to see in order to believe."

What clinched it for Alcala was being able to prove to the Caliling folk that what he was talking about can really come to pass. The marine biologist, who set up the Philippines' first marine sanctuary on Sumilon Island, Cebu, arranged for the fisherfolk to visit Apo Island, where Silliman University had persuaded the locals to set up a community-based coastal management program. Learning from previous experience about the need to involve local people, the Silliman team of professional community organizers worked hand-in-hand with Apo families from the beginning.

The Silliman team initiated the community-based Marine Conservation and Development Program in 1985 to enable local communities to protect and/or enhance their marine resources. The program included the establishment of marine reserves and sanctuaries. Livelihood projects, environment education activities, community development training, agroforestry and water development schemes, and outreach programs to get more communities involved were also undertaken.

Now completely in the hands of the local stakeholders, the Apo initiative has proven effective in preserving the coral reef and fisheries surrounding this small island. It has since become both a showcase and a model of successful community-based management program for other small island and mainland communities.

By 1992, most Apo fisherfolk believed that the marine reserve and

sanctuary on their island had significantly improved fishing, serving as a breeding place for fish.

CAMAFA member Leodegario Morales, an upland farmer displaced by insurgency in Negros, recalled their visit: "(There were) a lot of fish in Apo. Corals are protected. (We) saw that it was possible to protect corals and earn a good living. The people there owned appliances and good houses. The community was progressive and they have good schools."

The visitors also saw how conservation earned extra income by making Apo's rich coral reefs a major tourist attraction. Chua said, "We think we will earn more money if we can also attract tourists the way Apo has."

If Apo's community-based project has served as an inspiration to the neighboring land of the giants, another community-based movement in the Philippines has figuratively slain a giant.

Residents of the coastal town of Bolinao in Pangasinan, Philippine President Fidel Ramos' home province, have successfully barred the opening of a huge Taiwanese-financed cement plant in their community. Assurances by the proponents that the cement complex will not only be the biggest (it was estimated to cost P13.5-16 billion or over US$500 million) but the cleanest in the world did not weaken opposition spearheaded by the Movement of Bolinao Concerned Citizens, Inc. (MBCCI).

Helen T. Yap, Professor at the University of the Philippines' Marine Science Institute, says the controversy might have been the first time the community presented a really unified front. However, she believes that years of work by the Institute and others to raise the people's environmental awareness helped. The Institute has been in Bolinao since 1980, setting up a marine laboratory there. Its community-based Coastal Resources Management Project conducted educational campaigns on the recent controversy.

Yap recalled that even when they were just starting, they had more trouble selling their work to politicians than to ordinary people, even fisherfolk. "People who live on the coast appreciate their resources," Yap said. Thus, the locals readily accepted the laboratory in Bolinao, whose reefs form part of the Bolinao-Anda chain, declared as an "environmentally critical habitat" by President Ramos.

Members of the MBCCI consulted with the marine laboratory's scientists who warned that the cement plant would result in heavy dust fallout and depletion of groundwater. Potential environmental risks, particularly for marine resources, are also posed by increased quarrying, the operation of a coal-fired power plant, and pollution from cargo ships, among others.

MBCCI held rallies and wrote hundreds of letters to government officials, local and foreign NGOs, and the media seeking support for their cause. Virginia Pasalo, chair of the Women in Development Foundation, said, "We had to pray. It was our only chance."

Collaboration between experts and the local communities is also breathing new life into the waters of Guiuan in the central Philippines province of Eastern Samar. With their waters fished almost to extinction, the communities teamed up with the Guiuan Development Foundation, Inc. (GDFI), a social development organization set up by marine biologist Margarita de la Cruz to help fisherfolk.

GDFI organized the communities, promoted the use of more environment-friendly fishing methods, and introduced alternative livelihood activities. It asked experts from the Philippine Council for Aquatic and Marine Research and Development (PCAMRD) to assess Guiuan's waters and suggest solutions. On PCAMRD's recommendation, the Bagonbanua Marine Resource Replenishment Project was set up which served as a model for other marine reserves and sanctuaries in the area.

Similar community-based coastal management projects are now being launched in many parts of the Philippines. Like the ones cited, they are based on the belief that local resident resources users and stakeholders are the real coastal resource managers. Every successful project has, one way or another, transformed those closest to the resources into "decision-makers" on how best to protect and maintain the reefs, fish stocks, mangroves, and clean marine waters.

The approach is not simple. It is, in fact, quite difficult with many obstacles to overcome like poverty, growing population and weak formal government institutions. Successes, like those mentioned, are characterized by a combination of factors: strong NGO's, improved local government support, responsive donors, effective professional community-level workers and an increased willingness to try integrated approaches which link various government sectors with NGO and community groups.

A Little Less *Bahala Na*[1] in Talibon, Bohol

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Setting

When Bohol Integrated Development Foundation (BIDEF) Inc. started to work in the municipalities of Talibon and Bien Unido in the north of Bohol, the challenge to us was how to work with the fisherfolk and the Local Government Unit (LGU) in tackling the problems of an area that had once been a hugely rich fishing ground.

Talibon has one of the largest municipal waters in Bohol stretching towards Leyte and Cebu in the Central Visayas portion of the Philippines (see map on next page). It has a population of some 45,000 with an estimated 2,500 full time fishers and a further 1,000 part-time fishers. Of a total of 25 villages (*barangay*), 8 are islands, and a further 11 barangays fringe the coast. Similar to the rest of coastal Bohol, fish is the largest source of animal protein and fishing provides a medley of ancillary industries and other employment to the inhabitants of Talibon.

Fisherfolk Tales

A stroll along the shoreline used to fill a basket with seafood in 30 minutes according to many elders in Talibon. Shells, crabs and fish would make easy picking along large stretches of the coastline. A lot of the elder fisherfolk are like national libraries with their store of information about the sea. They say that so much has changed in the sea in the last 40 years. For example, they describe how up until the 1950's, turtles the size of bulldozers would appear and people would flee. A local fisherfolk joke in Talibon now shows this change:

A fisher arrives at the pier clutching a live sea turtle ('pawikan'). He walks down the pier

Oyster culture strings ready for hanging in the Ipil river as part of the San Pedro small fisherfolk association's livelihood project.

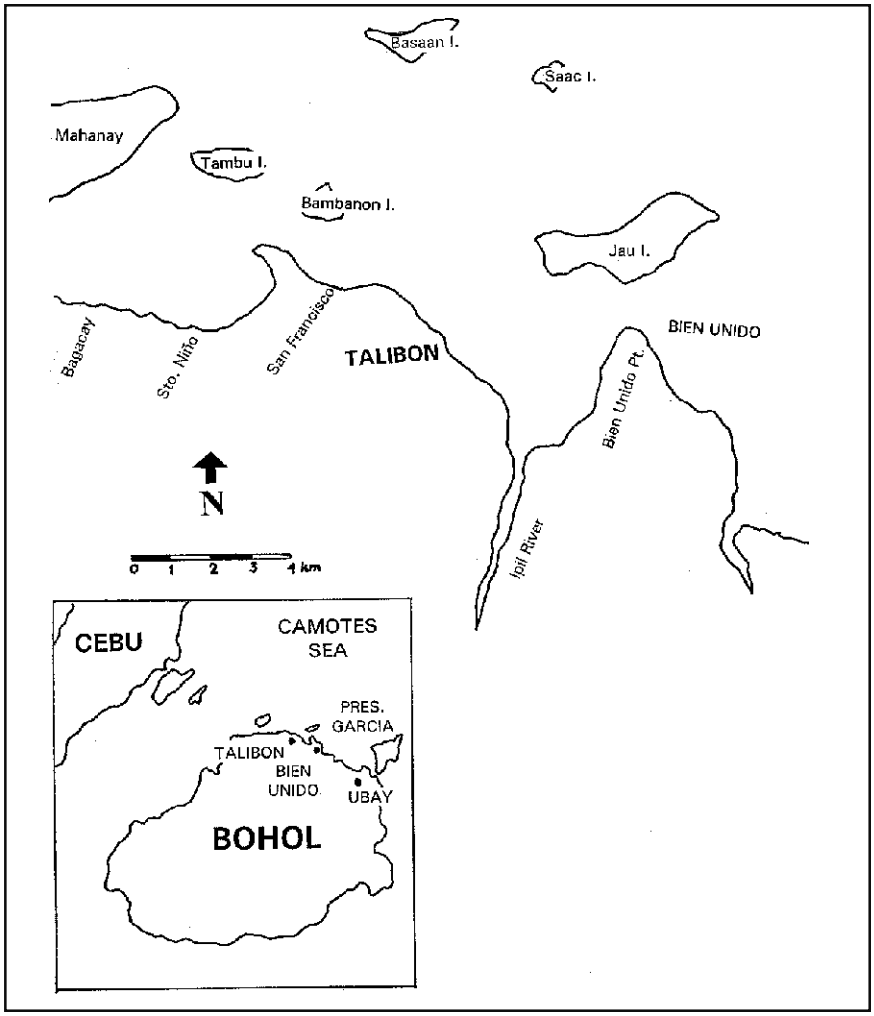
[1] *Bahala na* does not have an exact English equivalent. The closest translation would be "What will be will be."

on his way to the market to sell the turtle. A local official then shouts out of his office to the fisher walking past with the turtle. The fisher gets scared and immediately throws the "pawikan" back into the sea. The inspector rushes out of the office and asks why the fisher threw the turtle back into the water. The fisher says that he thought the inspector was going to arrest him. "Not at all," says the inspector, "I was going to say that I will buy the rum if you grill the turtle as 'sum-suman' (food taken while drinking)."

Working With Fisherfolk Communities

BIDEF Inc. entered Talibon and Bien Unido in 1994 through a two-year community-based coastal resource management project of the Foundation for the Philippine Environment. There were many of the classic problems in the area thus, requiring as much of a multi-disciplinary approach as our budget would allow. One of the biggest problems was illegal fishing, with a good chance of seeing and hearing dynamite blasts in the morning or evening. This was accompanied by a cocktail of other illegal fishing gears regularly exhibiting themselves in the area. "Planting rice" refers to dynamite fishing in the area, with the phrase describing a newly ploughed field, giving a good idea of what a recently dynamited reef looks like.

The fishery showed classic signs of overexploitation. The size of hooks had plummeted along with the mesh size of nets since the 1970's. Fishing gears had subsequently become ever more efficient with many trawls and a variety of scaring devices being used. Illegal fishing had become a way of life, with financiers controlling much of the illegal fishing gears, credit and marketing facilities, as well as enjoying strong political clout. There was even a fisherfolk organization whose main objective was to financially help one another if they ever get caught fishing illegally. The obvious result was of course habitat destruction.



MAP OF TALIBON, BOHOL.

The main aim of the project was to organize the fisherfolk into strong self-governing groups managing their own resources. To accomplish this, the program focused on research, community organizing, resource rehabilitation, networking and advocacy as well as training.

After the first year, the fisherfolk were organized and registered as small fisherfolk organizations with an average of 25 households in each. These organizations were made up of household units where women and youth participation was actively pursued. A series of seminars were conducted ranging from environmental awareness to leadership training to a marine biologist training. These all had good attendance so that slowly, the fishers began to internalize new knowledge and improved attitudes. The seminars ended with barangay and municipal level coastal resource management planning weekends and various cross visits. The participants then prepared their plans for the next two years with Bidef offering a package of tools and technical help.

Management Tools Used

Some groups opted for mangrove reforestation. Between 1994-1995, 15 hectares of mangrove stewardship contracts were awarded to fisherfolk organizations and individuals. The fisherfolk were paid to collect the propagules which they planted for free.

BIDEF facilitated the installation of artificial reefs (AR) in several areas of Talibon. Some ARs were used as anti-trawling devices while others were dropped in fish sanctuary areas as aggregating devices. Indigenous attraction devices or fish shelters made from coconut fronds were also used in several sites. Bidef supplied the materials while the fisherfolk designed and built the structures. Various measures were implemented to ensure that the ARs were properly managed.

Establishment of fish sanctuaries began in March 1995 with a 3-hectare marine reserve (with "no take" and "passive fishing only" zones) declared by one of the small fisherfolk organizations. This was followed by the declaration of 5- and 8-hectare sanctuaries within the same year. Talibon now has 8 sanctuaries, ranging from 3 to 40 hectares in size. All of these are supported by approved barangay and municipal ordinances. These areas include non-Bidef sites, proving that some of the project outputs have been successfully replicated in other areas.

A livelihood programme was also started. Fishers chose what they thought would be the best for their group while the project staff provided technical services. However, some activities failed due to a typhoon in 1994 which damaged houses. A few of the organizations extended loans to members for repairs.

Four marine-based cultures failed, including that of mud crab (*Scylla serrata*), due to a variety of technical and external factors. Some of the more visible successes, however, were the classic pig dispersal, grouper fish grow-out and sale, oyster culture, *Eucheuma* sp. (seaweed) farming, sea crab culture and solar electricity.

The Role of the Local Government Unit

By 1995, fisherfolk organizations became more active. They began to do their own lobbying and networking and to access funds from on-line government agencies for their various projects. A meta-legal campaign was also waged against illegal fishing in most barangays.

The new mayor, Juanario Item, conducted a series of barangay consultations and told the illegal fishers that they all had to stop engaging in illegal fishing. In three months, the local Philippine National Police had built their own boat and begun the awesome task of arresting illegal fishers. Those arrested included not only local residents of Talibon but also transient fishers from as far as Cebu and Leyte. The LGU of Talibon has now over one million pesos from illegal fishing fines and an array of impounded illegal fishing paraphernalia which are regularly burned to ensure that they would not be used again.

Some household incomes dropped due to the arrests. For instance, in one barangay, the school attendance dropped by over 60% during the first few months of the ban due to the inability to pay the school fees. BIDEF had no funds with for this kind of assistance. Those who engaged in illegal fishing said they had to continue with their illegal trade but would be happy to stop if they could have an alternative livelihood. In response, the Mayor released small loans to fisherfolk co-operatives amounting to over one million pesos.

The Gains of Cooperation

BIDEF organized municipal and barangay Fish and Aquatic Resource Management Councils (FARMC) in 1995. Both FARMCs are waging a good advocacy campaign against the remaining illegal fishers in their barangays as well as accessing small livelihood projects for their members.

A seminar and field trip about the importance of the Danajon Double Barrier Reef was held for the municipalities of Talibon, Bien Unido and Getafe. This is when co-management with the Talibon LGU and the fisherfolk truly began.

In early 1997, a new association called FISHWAT (Fishery Warden Association of Talibon) was formed and over 100 people were trained as deputized fishery wardens. The adequate representation of fisherfolk leaders, LGU members and BIDEF staff made possible the arrest of illegal fishers and the implementation of management measures at the community level.

All the fisherfolk organizations have now been federated into one group called the *Federasyon sa Gagmayng Mananagat sa Talibon* or FEGAMATA. Hopefully, this would enable them to become a lobbying voice at both barangay and municipal levels of governance.

A request to the Municipal Council to allocate budget for BIDEF to design a participatory zoning plan for the municipal waters and document its projects has been made. Hopefully, the LGU will eventually declare the whole area as a marine park.

Conclusion

According to fishers, fish catch has been increasing, with improved abundance and size of the mixed pelagic and demersal fishery. Many species have also reappeared. Needless to say, the fish market is thriving, with an abundance of fish species that they claim to be much larger thus, considered of higher quality. The consumers confirm this and are happy to note that the price has remained pretty steady.

Artificial reefs ready to be dropped to stop the intrusion of trawls and other illegal gears within traditional fishing areas of fisherfolk organizations.

An indicator of increased catch is the doubling of the number of passive fish corrals (*bungsod*) in the area. Another is the recent construction of 11 stationary bag net fishing gears locally called "newlook". This fishing technique has not been used for over 10 years in the area, being no longer feasible in the late 1980s due to the smaller catches.

The Talibon project is by no means complete. Yet, Talibon is well ahead of nearly all other areas of Bohol. The fisherfolk friendly Mayor and Municipal Council have proven to be effective law-making and implementing authorities in the area and they have made a lot of things happen within the municipality. Fisherfolk have become strong advocates of ecological protection and some of the organizations have been successful in accessing their own funds and waging good advocacy efforts.

Fish have reappeared quickly in demersal and barren areas. The fisherfolk are quite content just with a hook and line and some previous non-fishers have now taken up fishing as a supplementary livelihood. This suggests that fisheries management measures can really be seen and felt at the local level, and even more importantly, over a relatively short span of time.

The project is now working on its sustainability through training for trainers in the barangay and municipal resource management councils. A fisherfolk federation is also being developed.

An important lesson is that the most important stage of the project is community organizing and that the project needs a good mix of experienced staff with a variety of backgrounds. Being adaptable to the needs and wants of the fisherfolk is also essential.

While we were able to operate alone initially, it was only until co-management was implemented that the resource management really progressed. The time lag between the project start in 1994 and the change of officials in the local government unit in 1995 gave us time to get the fisherfolk organizations up and running, before approaching the co-management stage.

We look forward to working further with the LGU until we can all see the results of our endeavors—LGU's, fisherfolk's and non-government organization's. Good resource management takes time to develop, as does devolving the management of the resources to the resource users. But once community-based development begins to gain momentum, it becomes sustainable indeed.

[We hope that the Talibon example can spread to other parts of Bohol and beyond! Editor]

Acknowledgements

The entire BIDEF Inc. staff, especially the Talibon and Bien Unido team, composed of Bobby Rosales, Victor Orevillo and Gilde Auxillo and of course Talibon's Councilor Jose Wayne Evardo and Mayor Juanario Item assisted with this article.

BIDEF Inc. is a medium-sized non-government organization based in Tagbilaran City. It advocates fisherfolk-based coastal resource management. It has been working for over 9 years in resource management and has 4 coastal municipalities of Bohol with some 40 barangays within the "Bosicadd" program as project sites.

leadership models

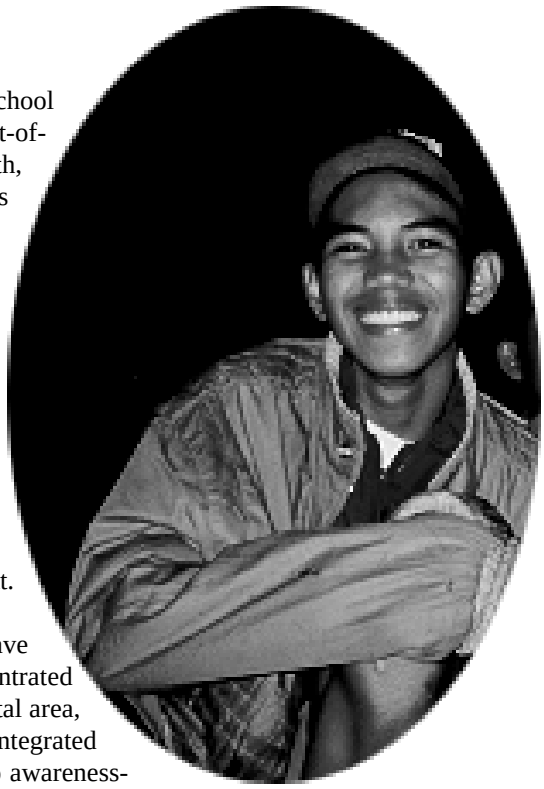
A New Generation Coastal Leader

Whenever the term *leader* is mentioned, most people think of age, experience, wisdom and knowledge … in short, people would immediately think of someone who has been around for a long time. Many people forget that leaders can also be young; and while relatively inexperienced and new to the role of being a leader, these youngsters can be very energetic, motivated, enthusiastic and action-oriented.

The Edicto family of Biliran Province, Philippines, provides us with a good example of this youthful leadership phenomenon. The budding leader in its midst, Arnel has emerged as a young citizen interested in conserving the natural beauty that surrounds his home *barangay* (village) of Tabunan in the municipality of Almeria. The grandson of a fisherman, Arnel embodies respect and admiration for the sea that has not only provided his family with a traditional livelihood, but with hours of recreation as well.

In January of 1997, Arnel was one of two selected by Plan International-Baguio and the United States Peace Corps to represent the youth of Biliran at the week-long Youth Ecology Camp at Camp John Hay. Arnel, then a second-year high school student, represented Tabunan High School. While at Camp John Hay, he met about 40 other youth from around the nation, all of whom were involved in environmental awareness and conservation. Plan International-Bagiuo introduced the concept of a Youth Conservation Corps and encouraged the students to enjoin other young people in the environmental movement when the participants go back to their homes.

Upon his return to Biliran, Arnel began his mission. He gave several talks in local high schools, discussing issues that ranged from environmental awareness to conservation activities. Eventually, the first-ever Youth Ecology Club in Biliran was formed at Arnel's Tabunan High School. With an initial membership of 12 volunteers ranging from high school youth to out-of-school youth, the Club has spent the last eight months making parents and neighbors aware of the fragile nature of the environment. While most activities have been concentrated on the coastal area, the Club's integrated approach to awareness-building has included sponsoring nature hikes along the neighboring volcano ridges, camping in the upland forest, and composting activities.



With Arnel as vice-president, the Club has participated in several beach clean-ups at the neighboring beach resort and along the barangay shoreline; encouraged the cessation of coral destruction in barangay waters; assisted the local fishing association in the physical preparations for a barangay marine sanctuary; and began tree-planting in deforested upland areas. In addition, the Club is meeting with a local piggery owner on the environmental impacts of the animal wastes currently being dumped into a river leading to the ocean. The teachers of Tabunan High School have also been introduced to the International Marine Alliance's CREST (Coral Reef Education for Students and Teachers) Manual. They use it to teach both about the environment and English.

Arnel currently plays an important role in assisting the Provincial Agricultural Office (PAO)-Fisheries Section and the Provincial Environment and Natural Resources Office (PENRO) by serving as a warning-system for sea turtle capture. Due to his efforts, the PAO and PENRO have been able

to save three hawksbills and one green turtle from the soup-pot. There is already talk in the Provincial Capitol that this young man should receive a certificate of appreciation from Governor Wayne M. Jaro for his environmental effort at the barangay level!

Arnel, indeed a young fourteener, is quickly gaining experience and insight in the ways of coastal environmental advocacy. With a lot more work, plenty of encouragement and a little luck, perhaps, he can cultivate enough coastal environmental awareness in Almeria and nurture in the hearts of its people the role that citizens play in conserving it, transforming a few believers and doers into a multitude.

By **Thomas Bayer**,
Training Coordinator, CRMP

the news

Earthwatch Expedition in Batangas, Philippines

An Earthwatch expedition was conducted from June 11-July 2, 1997 on coral reefs in Balayan Bay, Batangas to update past surveys conducted from 1991-93 and in 1995. The diverse and abundant reefs in the area provide many diving and photographic opportunities for both local and foreign SCUBA divers, and they support sustainable fisheries. The surveys showed that most of coral habitat substrates had improved remarkably in condition since 1991. However, although the reef substrates are intact, it cannot be ignored that they are also subjected to increasing pressure from overfishing in some areas, occasional destructive fishing and careless tourist operations.

The long-term goal of this coral reef monitoring project is to assist with management and protection of coral reefs in Mabini. The survey results provide feedback on the status of three sanctuaries as well as additional baseline data on potential management sites. In 1991, The Haribon Foundation established a marine reserve with three small sanctuary areas in collaboration with the local government of Mabini and two villages (*barangay*) in the Calumpan Peninsula. The barangays and resorts manage these sanctuaries. Now more sites are being eyed for sanctuaries.

The survey team comprised of 4 staff and 2 teams of 6 and 8 volunteers from England and the United States. Earthwatch Inc. organized the volunteer group while The Haribon Foundation and the Coastal Resource Management Project (A. White) facilitated the work through its crucial link with the barangay residents, resort operators and other members of the different communities in the study area.

68-year-old Earthwatch volunteer, Jane Jones, surveying the reef.

Those interested in the survey results can obtain a copy from the Principal Investigator, Alan White, c/o CRMP. Incidentally, the results are also part of Reef Check '97 (see next article).

By **Dolores Ariadne D. Diamante-Fabunan**,
CRM Specialist, CRMP

Global Coral Reef Status: Action at Last

Reef Check '97, the first global survey of human impacts on the world's coral reefs has been completed as part of the International Year of the Reef. Organized by the Institute for Environment and Sustainable Development (IESD) of Hong Kong University of Science and Technology, the survey involved over 100 marine scientists and 750 recreational divers who surveyed 300 coral reefs in 30 countries and territories between 15 June and 31 August 1997. (The data from the Earthwatch expedition in Batangas were also included.)

Reef Check survey methods were developed such that they are simple enough so that experienced divers with a minimum of a high school education could be fully trained in less than one day and allow each team to survey one reef per day; yet, include a strict quality control system and produce results that provide scientifically valid answers to key questions about human impacts on coral reefs.

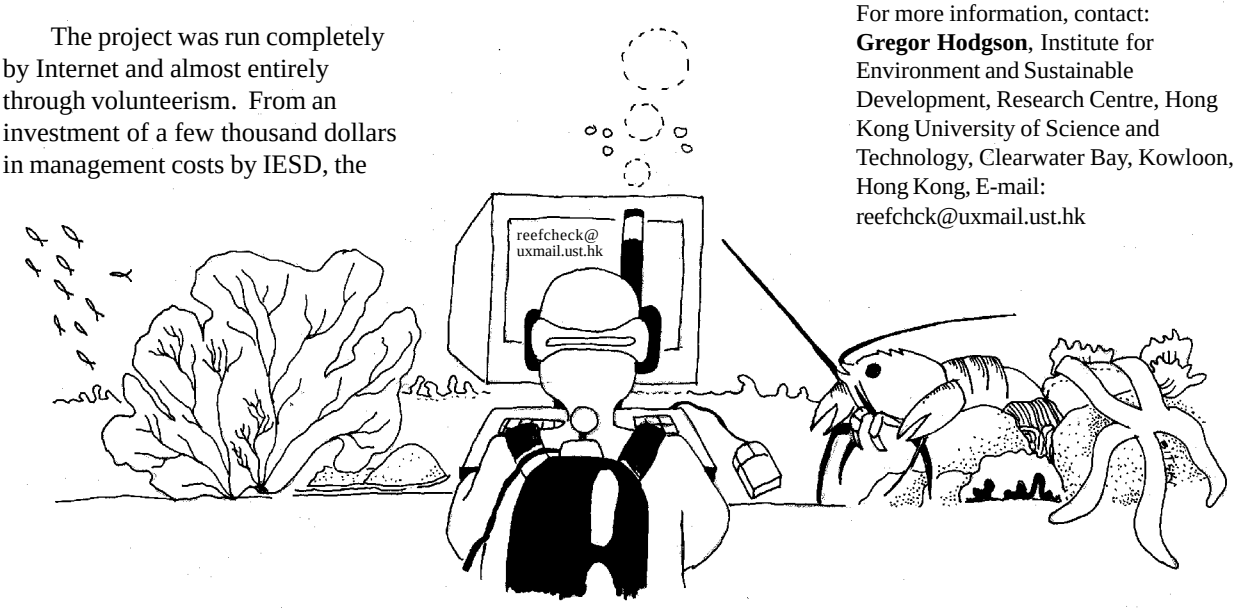
The project was run completely by Internet and almost entirely through volunteerism. From an investment of a few thousand dollars in management costs by IESD, the project produced about US$2 million worth of invaluable data worldwide. Preliminary results from about 230 sites have been released. A full report will be published later this year.

Results were rather alarming. No lobsters were recorded in 81% of the reefs surveyed. An average of 17 giant clams was found on the Indo-pacific reefs in contrast to 150-250 recorded in several protected sites in the Red Sea and Australia. According to the Sarawak Reef Check team, "99% of the reefs have been damaged by blast fishing." And to think that some scientists previously assumed that the reefs in this eastern coast of Borneo would still be untouched. The average percentage of living coral cover on reefs was 31% globally. However, only 7 sites indicated problems due to sewage pollution. Sewage pollution may be more important on reefs near urban areas which were not common in this study. The good news is that results from marine parks with proper management demonstrate the effectiveness of conservation to allow various species and populations to recover.

The world has reached the stage where it is technologically possible to monitor and to manage marine resources. Reef Check works well as a rapid assessment tool and indicates where additional, more detailed scientific studies are needed. Repeated annual surveys will be useful to determine if management practices are working and populations of indicator species are recovering. An annual "State of the World's Reefs" report is needed, based on both Reef Check and more detailed studies.

[Excerpted from the background material provided for the Reef Check 97 Press Conference by the Institute for Environment and Sustainable Development, Hong Kong University of Science and Technology courtesy of Gregor Hodgson, Global Coordinator]

For more information, contact: **Gregor Hodgson**, Institute for Environment and Sustainable Development, Research Centre, Hong Kong University of Science and Technology, Clearwater Bay, Kowloon, Hong Kong, E-mail: reefchck@uxmail.ust.hk



Ghana Team Visits Philippine Mangrove Management Initiatives

Representatives of the Lower Volta Mangrove Project (LVMP) composed of the Project Co-ordinator, two Councillors from District Assemblies (Local Government Units) within the project area as well as three staff members from the Wildlife Department who are directly involved in coastal wetland issues came on a study tour to the Philippines. The July 1997 study tour was organized by the British Council to provide a fresh perspective on mangrove management to the Ghana team.

Teodolo Selim, mangrove contract planter, being interviewed by Dickson Agyemar. Looking on are Simon Zoiku, Edem Keojo Wedz and Emma E. Melana of ERDS-DENR Region 7.

A number of activities were undertaken during the six-day visit: a) a briefing conducted by officials of the Department of Environment and Natural Resources (DENR) in Cebu; b) visits to community-managed forests under the stewardship scheme and areas where contract planting had been carried out; c) visit to the office of the Coastal Resource Management Project (CRMP) in Cebu; and d) a tour of the Silliman University Marine Laboratory including discussions with researchers involved in mangrove research, as well as field trips to Talabong Mangrove Reserve, Bais Bay, Negros Oriental and Getafe Mangrove Reserve, Bohol. When possible, the visiting team talked to the local people directly involved in mangrove planting.

The brief visit to the Philippines provided excellent opportunities for South-South networking. It validated the basic tenet of the LVMP, that for effective coastal resource management, there is a need to combine technical know-how with strong internally led approaches from the local communities for the management of mangroves. Except for differences in legal tenure of ownership of mangroves between the two countries, there are many similarities in techniques being used by CRMP and DENR in Ghana.

The LVMP is an 18-month project that aims to provide the information base needed to plan activities directed at regenerating mangroves in Ghana through community-based management initiatives. The LVMP is funded by the Department for International Development, formerly known as the Overseas Development Administration. The Project is recognized as an associated research activity by the Land-Ocean Interactions in the Coastal Zone Project of the International Geosphere-Biosphere Programme. The Project is also affiliated with the Lower Volta Environmental Impact Study funded by the Volta River Authority and implemented by the Volta Basin Research Project, University of Ghana.

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updates

What's Up in the CRMP Learning Areas

The Coastal Resource Management Project's (CRMP) learning areas cover portions of six provinces in the Southern Tagalog, Visayan and Mindanao regions. These are: San Vicente, Palawan; Northwest Bohol; Olango Island, Cebu; Negros Oriental; Malalag Bay, Davao del Sur; and Sarangani Bay, Sarangani. Operating for more than a year in these areas, the CRMP has established a solid partnership with the Local Government Units (LGU). Memoranda of Agreement, specifying mutual commitment and support for coastal resource management (CRM) were signed by CRMP and the LGUs of all the learning area municipalities and cities. Many activities that will facilitate the CRM process have been conducted at different levels. Participatory Coastal Resource Assessment (PCRA) has been completed in Palawan and is ongoing in the other five areas. The PCRA represents the first major phase in the CRM planning and implementation process. It is also inherently participatory, a cross-cutting theme of CRMP.

San Vicente, Palawan. One of the outputs of the PCRA were resource maps which describe vital information on the area's coastal resources as well as issues and problems confronting the communities. These maps were brought back to the communities for validation and to initiate *barangay* (village) planning. Currently, the CRMP team, with Carmelita Tagudar-Corkum as Learning Area Coordinator (LAC), together with the San Vicente Technical Assistance Office, are in the process of developing the design for the integrated coastal management plan for Port Barton. It could be a model given its thriving small-scale tourism industry and strong local commitment to CRM. The design will emphasize community participation, multi-sectoral and institutional support. The experience of Port Barton will serve as a springboard for more intensive CRM planning in other barangays, the results of which will serve as input to the San Vicente Municipal CRM Plan. To build enthusiasm and to expose the LGU and *barangay* leaders to successful CRM experiences in other coastal areas, 25 delegates from San Vicente went on a study tour to Cebu, Bohol and Negros in September 1997. This activity yielded many positive comments from the participants.

Negros Oriental. Spearheading CRMP-related activities in Negros Oriental is William Ablong. Negros Oriental is quickly moving ahead with various activities in spite of the rather extensive coverage, seven coastal municipalities and two cities. In partnership with the Department of Agriculture (DA)-Bureau of Fisheries and Aquatic Resources and the Office of the Provincial Agriculturist (OPA), the project has supported the conduct of training courses and organization of the *Bantay-Dagat* (community volunteers deputized by the government to patrol the coasts) groups into municipal federations. Together with the Resource Management Division under the Provincial Planning and Development Office (PPDO), a marine ecology seminar was held in Amlan with the municipal staff and some staff from line agencies in attendance. A partnership arrangement with a non-government organization (NGO), the Ting Matiao Foundation (TMF), has recently been formalized to help facilitate the CRM planning process at both the municipal and barangay levels. An advisory council to TMF-CRMP has been formed to facilitate better coordination and implementation of project activities in the learning area. Council members include the Department of Environment and Natural Resources, DA-OPA, PPDO, Silliman University and a representative of the LGU (on call basis). Preparations for the PCRA which will start in January are underway.

Northwest Bohol. Various CRM planning and implementation activities are commencing in Bohol under Camilo Cimagala, with NGO support from the Haribon Foundation. A PCRA trainers' training course has been completed while municipal PCRA facilitators' training courses are currently being

held. Intensive community organizing work has been started by the Haribon CRMP staff in the islands of Batasan in Tubigon and Jagoliao in Getafe. CRMP is also providing some inputs to the Coastal Zone Management Section of the proposed Environment Code of the Province. Expansion sites Dimiao, Loon and Getafe are showing serious interest and commitment in pursuing CRM activities in their respective municipalities.

M.F. Portigo

The Olango Island youth taking a stand for better management of their coastal resources.

Olango Island, Cebu. Olango is an island with 11 barangays under the jurisdiction of Lapu-lapu City. Learning Area Coordinator Ma. Fe Portigo, with the assistance of a social work intern from St. Theresa's College are currently undertaking social preparations for the actual PCRA at the barangay level. Through their involvement in different community activities, the youth are now beginning to take a stand in favor of better management of their coastal resources. Responding to the issue on lack of livelihood and enterprise opportunities in the island, the Enterprise Development Specialist of CRMP, Monette Flores, together with the LAC, initiated enterprise resource scanning sessions with the different sectors in Olango Island. Data gathered from these sessions will serve as basis for the development of possible enterprise development strategies and projects in the island.

Sarangani Bay, Sarangani. Coordinating CRM activities in Sarangani is Hermenegildo Cabangon. The PCRA has already gone a long way in this learning area. Some barangay and municipal data are being incorporated into the first draft of the Coastal Area Profile. Last September, a seminar on community organizing was conducted for the benefit of 166 community organizer volunteers from different municipalities and General Santos City. Technical inputs were provided by CRMP advisors Evelyn Deguit and Ruperto Sievert. The LAC is active in the Sarangani Bay Protected Area Management Board. To explore possibilities for strategic expansion, the LAC attended orientation meetings on the South Moro Gulf Coastal Community Development Project. A general Memorandum was recently signed for CRMP to support CRM in the municipalities of Kalamansig, Lebac and Palembang in Sultan Kudarat.

Malalag Bay, Davao del Sur. The pace is picking up in the Malalag Bay learning area. Additional staff, Oscar Francisco and Johnette Delejero, were recruited to assist LAC Melchor Maceda. Cluster municipal PCRA training courses have already been completed and barangay level PCRAs are underway. To address CRM issues on law enforcement, fishery regulation and municipal water boundaries, a workshop to discuss the possibility of a Unified Fishery Ordinance for the province was held. An offshoot of said activity was the formation of a Technical Working Group tasked to draft the ordinance. CRMP provides legal support through its linkage with the Legal Environmental Advocacy Program of Silliman University. The LGUs' strong interest in a unified fishery ordinance for the province will hopefully serve to get the LGUs together to discuss mutual, inter-municipal CRM plans and actions.

The six learning areas are following similar tracks of the CRM planning process but are at different stages of completion. The enthusiasm is high and LGU counterpart participation is increasing, pointing to sustainable outcomes.

By **Evelyn T. Deguit and A. White**
Community Organizing/Community Development Advisor and CRM Coordinator, CRMP

ICM Training: A 1998 Addition for CRMP

In January 1998, the Coastal Resource Management Project (CRMP) will launch the Integrated Coastal Management (ICM) training course. Aimed at mid-level policy makers in both the private and public sector, the course enables decision-makers to comprehend the full scope of integrated coastal management, from upland, to human settlement, to marine environment.

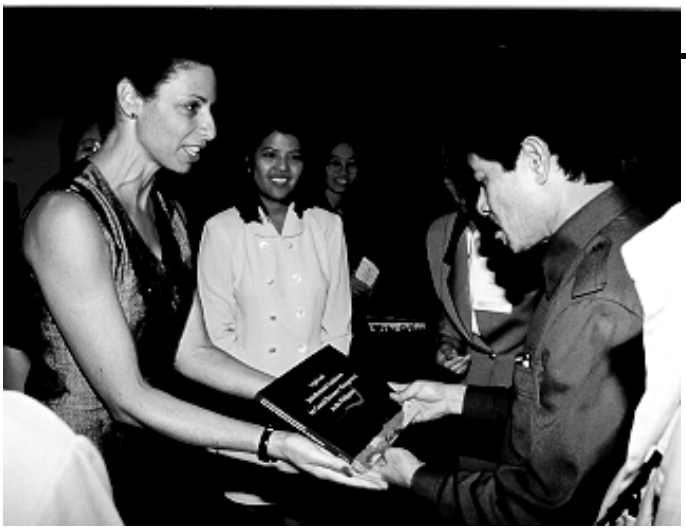
This training course brings together materials previously developed by various groups. These materials include the National Course on ICM developed by six organizations (Department of Agriculture-Bureau of Fisheries and Aquatic Resources, Department of Environment and Natural Resources-Coastal Environment Program, Philippine Council for Aquatic and Marine Research and Development, The Haribon Foundation, International Center for Living Aquatic Resources Management and the International Institute of Rural Reconstruction) and materials developed by the University of Rhode Island-Coastal Resources Center, Silliman University and the ASEAN-US CRMP implemented by ICLARM (1986-1992). The course features field exercises on participatory coastal resource assessment (PCRA) and case studies on ICM from the Philippines and other Asian nations. It also features several new resources such as the *Legal and Jurisdictional Guidebook for Coastal Resource Management in the Philippines* and a new handbook on PCRA to be published by the CRMP, as well as case studies on resource valuation and ecosystem definition.

Approximately 25 participants will be invited to each course, representing different government, non-government and private organizations working on coastal management issues.

The training course will be held at CRMP's six Learning Areas, beginning with Palawan and moving on to Sarangani in March of 1998. The course will also be available for expansion into other areas in the Philippines.

For further information, contact: **Thomas Bayer**, Training Coordinator, CRMP

CRMP Mounts Exhibit at Mayors' Convention



*Among the well-known dignitaries who visited the CRMP exhibit was Autonomous Region for Muslim Mindanao Governor Nur Misuari, shown here receiving a copy of the **Jurisdictional Guidebook** from CRMP Chief of Party Catherine A. Courtney.*

The Coastal Resource Management Project (CRMP) held a highly successful exhibit at the annual convention of the League of Municipalities of the Philippines (LMP) last October 8 and 9 at the Manila Midtown Hotel. The well-attended convention was just the right venue for CRMP to bring its message to the attention of a high-powered audience composed of mayors as well as top national government officials, including President Ramos himself and a number of leading "presidentiables."

The convention served as a forum for CRMP to explain to the League what the Project and coastal resource management are all about. LMP reserved for CRMP a one-hour slot within which to present its

*President Ramos raises his copy of the **Legal and Jurisdictional Guidebook for Coastal Resource Management in the Philippines** for the mayors to see. To his right are DENR Undersecretary of Field Operations Virgilio Marcelo, USAID Office of Environmental Management's Ronald Senykoff, CRMP's Annabelle Trinidad (partly hidden), and LMP President and Sampaloc Mayor Agnes Devanadera.*

program as well as launch and present to the League the precedent-making *Legal and Jurisdictional Guidebook for Coastal Resource Management in the Philippines*, a collaborative effort of the Department of Environment and Natural Resources, the Department of Agriculture-Bureau of Fisheries and Aquatic Resources, the Department of Interior and Local Government, several academic and scientific institutions, and non-government institutions through CRMP. The *Guidebook* was later presented to President Ramos, also during the convention.

A memorandum of agreement (MOA) between CRMP and LMP signed last July paved the way for CRMP's participation in the convention. Under this MOA, CRMP and LMP also agreed to, among others, jointly launch a search for best management programs in Philippine municipalities and organize cross-visits among coastal municipalities to encourage exchange of information and experience in coastal management.

The CRMP exhibit brings the message of coastal management ot the League of Municipalities' Annual Convention.

By **Asuncion Sia**, IEC Specialist, CRMP

CRM HOTLINE

HOTLINE

The Coastal Resource Management Project invites you to send in burning questions that you may have on any CRM-related issue.

Please contact us at the CRMP, 5/F CIFC Towers, J. Luna cor. Humabon Sts., North Reclamation Area, Cebu City,
Tel. (032) 232-1823 Fax (032) 232-1825
E-mail: prccebu@usc.edu.ph

Artificial Reefs Stopped!

Fish shelters, both floating and benthic, are traditional, indigenous fishing gears. The shelters are often made of stones, rocks, branches, twigs and bamboo. They are used in various places in the archipelago and have many different local names like *rama, arong, konukon, dugmon, pakpet, osok, payaw, legma, padapoan, rineppet, tarangutong, amatong, gango, panapok, pangatob, lungga* and *panalipot*. Fish attracted to the structures are caught by hook and line, spear, pots or nets.

In the late seventies, researchers from the Silliman University, University of the Philippines and the Bureau of Fisheries and Aquatic Resources (BFAR) as well as Peace Corps volunteers introduced a new form of fish shelter called artificial reefs (AR) using bamboo, tire and concrete. This technology would later become popular, starting in the mid-1980s, largely due to efforts of the Philippine Fisheries Development Authority and other government projects like the Artificial Reef Development Program, Central Visayas Regional Project-Nearshore Fisheries Component, Livelihood Enhancement for Agricultural Development and the Fisheries Sector Program as well as donations that poured in from the private sector and non-government organizations (NGO). Seen as another way to increase fish production and fisherfolk income, early proponents and donors promoted the establishment of ARs which sadly continues to this day despite the signing of the Moratorium. Administrative Order No. 97-01, Series of 1997, "Setting of Moratorium on the Deployment of Artificial Reef Nationwide" was signed jointly by the Secretaries of the Departments of Environment and Natural Resources (DENR), Agriculture (DA), Interior and Local Government (DILG), and National Defense (DND) last September 8, 1997 calling for the immediate suspension of AR deployment until a collaborative policy study is made and guidelines are issued.

Left off-limits to fishing, ARs can enhance the marine resources. With proper planning, they may provide new habitats for different organisms, help establish a food chain and increase natural productivity and become a nursery for juveniles. The establishment of ARs can also be used as an entry point for fisherfolk organizing and fishery conservation. Newly formed fisher groups may show their first collective action by building and launching ARs. By allowing some form of limited fishing, ARs can re-introduce territorial use rights. Their need for security can expand fisherfolk concern to include surveillance against all sorts of illegal fishing. ARs, too, can be designed as trawl barriers. Economic/financial analyses have also shown ARs to be income-generating and profitable. Indeed, ARs have many potentials. However, in practice, such potentials are prejudiced. ARs are sometimes dropped in deep mud or silty waters, improperly fastened or lightly anchored, tumble down in steep bottoms, placed on top of or near a natural reef or worse, in shallow waters, where they are very much vulnerable to strong wave action. In some cases, because of scarcity of materials or insufficiency of funds, no additional modules are constructed to complete the ideal number or to replace old ones. Since ARs attract fishes within the area, fishing becomes even more efficient. In a situation where there is overfishing, it can only result to more overfishing especially when they are blasted. If properly sited and designed—in great numbers—ARs may well be a copy of destroyed natural reefs (White *et al*. 1990). Thus, the Order alleges that ARs cause overfishing and depletion of fish stocks.

The technological and social development of ARs does not have a corresponding legal, regulatory parallel. Before the passage of the Local Government Code in 1991, municipal ordinances licensing ARs could not gain approval. The attempt to issue a national legislation through a Fisheries Administrative Order floundered after the drafting committee of BFAR failed to determine whether an AR is a gear or not; hence, whether the subject was well within its jurisdiction at all. The Order cited this absence of clear-cut purpose, objective and policy on the construction, use and management of ARs.

Even before the Order was issued, there were already questions about the wisdom of deploying ARs. Some poor fishers wondered why the fish, and not them, deserve a higher priority for housing. Some raised the potential toxicity of the tires. In 1994, a workshop held at the International Center for Living Aquatic Resources Management in Manila, attended by representatives from the government, academe, foreign donors, research institutions and NGOs, concluded that it was more sensible to protect natural reefs (Munro and Balgos 1995). Investment for ARs may be better used for the conservation of the existing natural reefs. Still, many have yet to realize that it is more difficult to refill an empty sea than to stop destructive fishing. It was also determined in the workshop that most AR sites were unmonitored thus, casting doubt over the allegation that ARs increase fish biomass.

The Moratorium takes effect immediately. Unfortunately, it has no penal provision for non-compliance. Also, by "AR", the Order covers not only those made of bamboo, tire and concrete but **any** hard structure or material and does not discriminate between the "destructive" ARs and the traditional fish shelters. It also does not say who will do the study. And information about the Moratorium needs to be widely disseminated for it to be truly effective. Nevertheless, the Order created a committee which will review the study and formulate policy guidelines. The committee is composed of the Secretaries of the DENR, DA, DILG and DND and the Presidential Management Staff. The committee will select two additional members from federations of fishing associations and NGOs active in fisheries research and conservation. It will submit periodic reports to the President. DENR's Coastal Environmental Program acts as the secretariat.

By **Ruperto Sievert,** Technical Assistant, CRMP

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Munro, J.L. and M.C. Balgos (eds.). 1995. **Artificial Reefs in the Philippines.** ICLARM Conf. Proc. 49, 56 p.

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information

Useful References and Sources of Information

The following references on coastal management are available at the CRMP library. Photocopies of short references particularly those not available from the authors or publishers can be provided upon request. All references are listed alphabetically within the year of publication.

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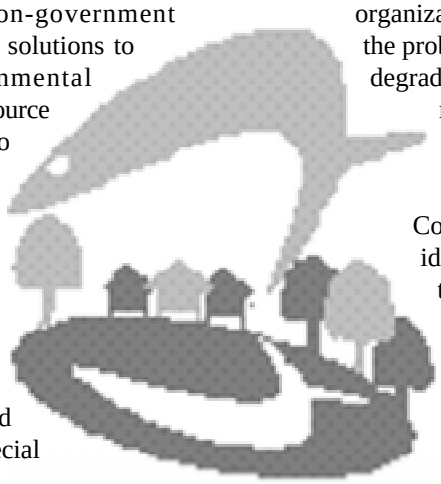
THE SEARCH FOR
BEST COASTAL MANAGEMENT PROGRAMS
OCTOBER 1997-MARCH 1998

in celebration of the 1998 International Year of the Ocean and the Philippine Centennial

Our coastal areas are in a state of crisis: overfishing, pollution and habitat destruction are rapidly depleting what we once thought to be an inexhaustible source of food and income. The problem is urgent, and its sheer immensity daunts and taunts us. Where and how to begin? With what?

It is heartening to note that, in many coastal communities around the country today, it is the fisherfolk themselves, encouraged and supported by their local governments and working with the private sector, non-government organizations and the academe, who are providing long-term solutions to the problems of resource depletion and environmental degradation in their areas. In these communities, coastal resource management—CRM—has become, or is on its way to becoming, a way of life for all.



The Search for Best Coastal Management Programs is an effort to identify these models of CRM, not only recognize them, but also so others can learn from and be inspired to follow them. It was launched during the convention of the League of Municipalities of the Philippines (LMP) on October 9, 1997, and will end in June 1998. The awards will be given out at special awarding ceremonies to be held in July.

The search is a project of LMP supported by the Coastal Resource Management Project.

LGUs and other groups or individuals who are interested in joining this project may contact Catherine A. Courtney, Chief of Party, CRMP, 5/F CIFC Towers, J. Luna cor. Humabon Sts., North Reclamation Area, Cebu City, Tel. (032) 232 1821 to 22; 412 0645; 412 0487 to 89; Fax (032) 232 1825; E-mail prccebu@usc.edu.ph. The deadline for the submission of entries is on March 30, 1998.

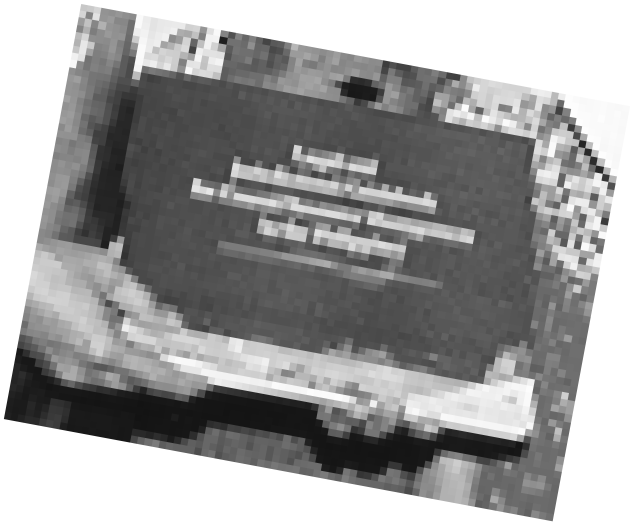
Sewing for a Cause

The Coastal Resource Management Project (CRMP) is calling on all local government units to support the 1998 International Year of the Ocean by contributing to the making of *Ang Tapiseryang Bughaw* (Blue Tapestry). *Ang Tapiseryang Bughaw* is a social mobilization project using group sewing techniques such as patchwork, embroidery, applique and cross-stitch to bring together people and encourage them to collectively express their appreciation of a common resource – the ocean – as well as their concern for their common future. The "patches of blue" contributed by the different municipalities will be sewn or strung together to form one long blue tapestry—*Ang Tapiseryang Bughaw*—which will serve as a symbol of the many facets of our 18,000-km coastline and the communities it nurtures, and a fitting celebration of the diversity of the Philippine coasts and the unity and cooperative spirit necessary to protect this diversity.

LGUs and other groups or individuals who are interested in joining this project may contact Catherine A. Courtney, Chief of Party, CRMP, 5/F CIFC Towers, J. Luna cor. Humabon Sts., North Reclamation Area, Cebu City, Tel. (032) 232 1821 to 22; 412 0645; 412 0487 to 89; Fax (032) 232 1825; E-mail prccebu@usc.edu.ph.

Jurisdictional Guidebook for Coastal Resource Management

What law or national agency governs coastal area resettlement issues? Is the establishment of the Fisheries and Aquatic Resources Management Council obligatory? Is it illegal to collect or harvest corals? Who has jurisdiction over siltation problems? Over foreshore leases?



These questions and other jurisdictional and legal issues related to coastal resource management (CRM) are answered and clarified in the precedent-setting *Legal and Jurisdictional Guidebook for Coastal Resource Management in the Philippines* jointly produced under the United States Agency for International Development-supported Coastal Resource Management Project (CRMP) by the Department of Environment and Natural Resources, the Department of Agriculture-Bureau of Fisheries and Aquatic Resources, and the Department of Interior and Local Government in cooperation with the local government units (LGU), people's organizations and non-government organizations.

Indeed, in many coastal municipalities around the country today, coastal resource management has become a catchphrase that expresses both the communities' and the government's (both at the national and local levels) concern over the degradation of the coastal environment and their commitment to remedy the problem. However, as the *Guidebook* notes, "LGUs today have more responsibilities over various resources than in the past, but they are often not yet capable of managing these resources."

The *Guidebook* is described as "a practical workbook which offers hands-on access to information which will assist CRM practitioners to better implement their jobs." It was launched during the annual convention of the League of Municipalities on October 9, 1997.

For details, please contact the **Coastal Resource Management Project**, 5/F CIFC Towers, J. Luna cor. Humabon Sts., North Reclamation Area, Cebu City, Tel. (032) 2321821 to 22, Fax (032) 2321825; or Annabelle Cruz-Trinidad, CRM Policy Advisor, CRMP, PRIMEX, Suite 504, Manila Luxury Condominium, Pearl Drive, Pasig City, Tel. (02) 6333717, 63347338, Fax (02) 6347340.

CALL FOR ABSTRACTS

The Coastal Management journal is soliciting abstracts for an upcoming special edition:

"Coastal Management Approaches in Tropical Countries Broaden Our Perspectives"

Some of the most innovative approaches and influential theory for coastal management have been developed in the tropics in the last two decades. A critical examination of case studies employing these approaches and theories could benefit coastal managers and communities from both tropical and temperate areas. This special edition will highlight and examine the diversity of approaches to coastal management as practised in the tropics with a particular emphasis on practices that seem to be successful. *Coastal Management* is requesting substantive abstract submissions (500-750 words) for case studies of tropical coastal management programs.

Abstracts should include a brief but descriptive title, names of authors, addresses, phone and fax numbers, and E-mail addresses. Abstracts should include basic information on:

1) project goals and components;
2) project implementation process;
3) overview of accomplishments and limitations; and
4) lessons learned and contributions to the field of coastal management.

Please send a hard copy of your abstract by January 15, 1998 to: Patrick Christie and Alan T. White, special edition guest editors, *Coastal Management*, School of Marine Affairs, 3707 Brooklyn Ave. NE, Seattle, WA 98105-6715, USA, Tel: 1-206-232-1939, Fax: 1-206-543-1417, E-mail: patrickc @u.washington.edu and prccebu@usc.edu.ph

Upcoming Meeting

September 1-4, 1998. **European Meeting of the ISRS** (International Society for Reef Studies). University of Perpignan, France. Contact: René Galzin, Convenor ISRS European Meeting, Ecole Pratique des Hautes Etudes, URA 1453 CNRS, Université de Perpignan, 66860 Pergignan Cedex, Tel: (33) 4 68 66 20 55, Fax: (33) 4 68 50 36 86, E-mail: galzin@univ-perp.fr

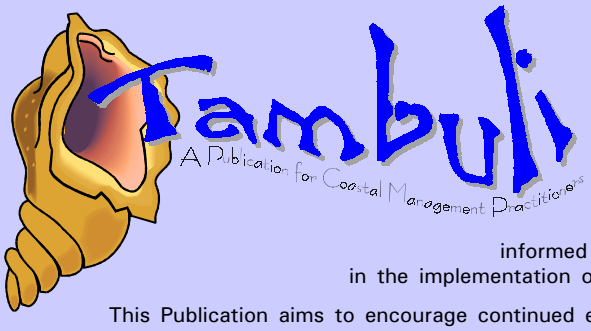
Upcoming Training

June 1-26, 1998. Summer Institute in Coastal Management. Coastal Resources Center, University of Rhode Island, USA. Contact: The Training Manager, Coastal Resources Center, Narragansett Bay Campus, The University of Rhode Island, Narragansett, RI 02882 USA, Tel. (401) 8746212, Fax (401) 7894670, E-mail: mjwood@gsosun1.gso.uri.edu

CRMP Launches Website

The Coastal Resource Management Project will launch its own website in January 1998. The site will incorporate pages focusing on the International Year of the Ocean, coastal resource management in the Philippines, CRMP activities, CRM hotline, and an on-line magazine for sustainable seas to be called "Over Seas".

Visit us at
http://www.oneocean.org



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CRMP focuses on leadership and empowerment, informed decision-making, and positive changes in human behavior in the implementation of CRM.

This Publication aims to encourage continued exchange of information, experience and ideas on coastal management among planners, managers, community leaders and other coastal resource users, given the increasing need for improved coastal management and in recognition of the need for sustained environmental advocacy.

Readers are enjoined to contribute by sending:

- **Substantive articles** (1,000-2,000 words) that highlight coastal management issues, management plans and implementation, leadership for the responsible use and management of coastal resources, processes and methodologies, mitigating measures and other pertinent aspects of coastal management.
- **Short articles** (500-1,000 words) on topics relevant to coastal management.
- **News items** concerning coastal management activities.
- **Notices** of upcoming coastal management related events, meetings or workshops.
- **Letters** and **comments** for publication, or otherwise, which clarify views or **suggestions** on how to improve this publication.

We would appreciate both diskette and hard copies of the articles. Diskette copies should be in MS Word. Hard copies should be typewritten, double-spaced, with font (font size)—Univers (11). Illustrations (e.g., graphs, tables, maps, sketches), photographs and/or slides (colored) should have appropriate captions.

Please send all contributions and correspondence to: The Editor, TAMBULI, CRMP, 5th Floor, CIFC Towers, North Reclamation Area, Cebu City, Cebu, Philippines. Tel. No. (63-32) 232-1821 to 22, 412-0487 to 89, 412-0645; Fax No.: (63-32) 232-1825; E-mail: prccebu@usc.edu.ph

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