

Manila Hosts the International Year of the Reef

April 10 marked the launching of the International Year of the Reef (IYOR) '97 in the Philippines. A press conference billed "Ugnayan sa Rembrandt" was held at the Hotel Rembrandt in Quezon City, Metro Manila. Panellists included Department of Environment and Natural Resources Undersecretary Delfin Ganapin, Bureau of Fisheries and Aquatic Resources-Coastal Resources Management Chief Jessica Muñoz, Philippine Council for Aquatic and Marine Research and Development (PCAMRD) Deputy Director Cesario Pagdilao, National Coalition for Fisheries and Aquatic Reform National Coordinator Hilario Manaog and University of the Philippines-Marine Science Institute (UPMSI) Director Edgardo Gomez. The Apo Hiking Society were guest performers. The whole occasion was highlighted by the unveiling of the IYOR logo. This signalled the official launching of the International Year of the Reef 1997 in the Philippines.

The objectives of the conference were to: discuss the state of coral reefs in the Philippines; and discuss the measures undertaken for the protection and preservation of this ecosystem. The President of the Republic of the Philippines will be formally

informed of the International Year of the Reef through a letter signed by the panellists.

Other IYOR '97 activities are slated at least every month thereafter; many of which will start in May, the national coral reef month.

The "Ugnayan sa Rembrandt" was facilitated by the Coral Reef Information Network of the Philippines (PhilReefs). PhilReefs is a network of different groups (government, non-government, people's organizations, academic and research institutions, the private sector, etc.) and individuals that work together in establishing a coral reef information exchange database. The network was instituted in January 1996 and has an interim secretariat at the UPMSI and is under the auspices of DOST-PCAMRD.

The International Year of the Reef '97 was first launched at the 8th International Coral Reef Symposium in Panama City in June 1996. IYOR is the global celebration of enhancing awareness for the preservation of coral reefs.

For more information, contact:
The Secretariat, Philreefs, Marine Science Institute
University of the Philippines, Diliman 1101
Quezon City, Philippines
Tel: (+63-2) 9223921 Fax: (+63-2) 9247678
E-mail: philreefs@msi.upd.edu.ph



Indonesian CRMP Goes from Local Action to National Initiative

Awareness of the need for improved coastal resource planning and management has expanded rapidly in the past decade in Indonesia. There are now several sectoral, cross-sectoral and industry-based initiatives designed to support its national development plans. A lot has been drawn from global experience in integrated coastal management (ICM), encouraging Indonesia to "fast track"

development of ICM systems and skills. Various types and levels of ICM effort are now underway although, few of these have, as yet, led to tangible changes in coastal resource allocation or use.

It is within this context that the United States Agency for International Development (USAID)-supported Indonesian Coastal Resources Management Project

(CRMP) has been developed. The Indonesian CRMP is part of the strategically focused natural resources management (NRM) program developed by USAID and BAPPENAS (the Indonesian National Planning Agency) being implemented by various agencies in co-operation with Indonesian partners. The NRM program is designed to decentralize and strengthen natural resources

management in Indonesia. Interventions under the NRM program are intended to result in (USAID, 1996):

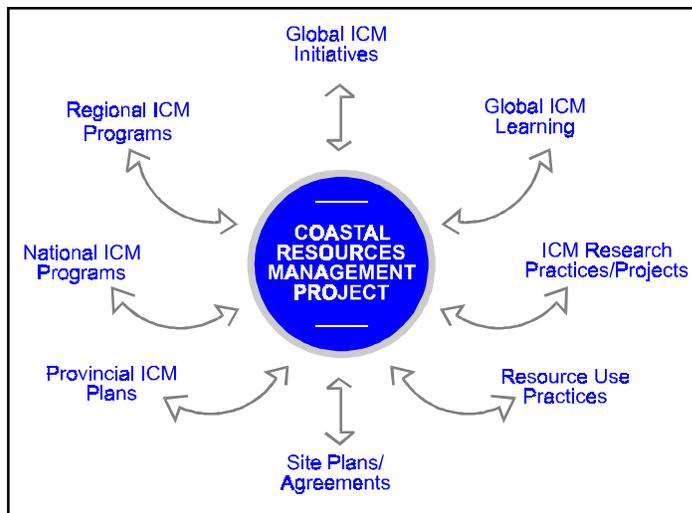
- (a) greater stakeholder participation in decisions about the planning, management, use and monitoring of natural resources;
- (b) improved NRM policy development and implementation; and
- (c) strengthened institutional capacity for biodiversity conservation.

The Indonesian CRMP operates at both the local and national levels and involves both government and non-government stakeholders in coastal resources management (CRM), seeking to apply lessons from local experience in institutional and national policy development. As Figure 1 suggests, the “two track approach” of the CRMP thus, has the potential to create impacts at a range of scales and is filling a key niche in the development of Indonesia’s CRM capability. Equally significant, the project is actually achieving “on ground” results while establishing models and processes with more generic application.

There are five core CRMP components.

1. Field Development Program

Field programs are the foundation of the CRMP. The first is being established in Minahasa District of North Sulawesi. Sites in other Provinces will be incorporated in the CRMP from 1998 and the CRMP will also assist other NRM



POTENTIAL IMPACTS OF THE CRMP.

program partners with their programs in coastal locations.

2. Strengthening Institutions and Human Resources

This supports the institutional fabric for CRM and focuses on both government and non-government institutions, including academic, professional and industry bodies. Particular emphasis is being given to skills development in young professionals and women.

3. Monitoring, Learning and Policy Support

The Centre for Coastal and Marine Resource Studies (PKSPL) at the Bogor Agricultural University (IPB) is working closely with the CRMP Team and the Research and Learning Unit of the Coastal Resources Center to monitor field programs and support transfer of this information into the policy arena.

4. Communication, Outreach and Marketing

Many audiences for the CRMP are being targeted in a structured way via a range of educational and marketing strategies: awareness raising, information transfer and behavioral change and the use of a range of media.

5. Management and Coordination

This component provides the administrative support to enable CRMP resources to be applied efficiently and effectively. By collaborating with other coastal management programs and counterpart agencies (who will contribute 25% of project resources throughout the project), it is intended that strong integrated coastal management programs will continue once the CRMP ends in 2003.

Measuring the extent to which the CRMP can contribute to the realization of NRM objectives is a novel and challenging task in Indonesia. This has been proactively addressed from the outset of the project by establishing a Performance Monitoring Plan for the NRM program and thus underpins CRMP implementation.

For further information, please contact:

Ian M. Dutton, Coastal Resources Center-URI, CRMP Jakarta Darmawan, Centre for Coastal and Marine Resources, Bogor Agricultural University,

Brian Crawford, CRC-URI, CRMP Manado or the CRMP/NRM Secretariat, Jl. Madiun No. 3, Menteng 10320, Jakarta Pusat INDONESIA, Tel: (6221) 3926424 Fax: (6221) 3926423 E-mail: crmp@cbn.net.id

[Future editions of Tambuli will report on the progress of the CRMP in Indonesia. There is much potential for cross-program co-operation particularly in view of their geographic proximity and design similarities. Editor]



Mapping and Monitoring Go Full Blast in Eastern Samar MPAS

The provincial government of Eastern Samar, headed by Governor Lutgardo B. Barbo, has extended financial assistance to the Coastal Zone Management Councils (CZMC) of seven municipalities. The assistance to the towns of Lawaan, Balangiga, Giporlos, Quinapondan, Salcedo, Mercedes and Guiuan was channelled through the Guiuan Development Foundation, Inc. (GDFI). This assistance will enable these municipalities to delineate the boundaries of their respective municipal marine protected areas or MPAs (reserves and sanctuaries).

Approval of the provincial aid amounting to P280,000.00 was facilitated by Provincial Board

Member Fernando Lugay. The amount will be used to purchase materials for markers and signboards, basic gear (snorkel, mask, etc.) for monitoring teams and to defray mapping expenses. The Department of Agriculture (Region 8) will provide the buoys while members of the CZMCs, including representatives from the local government units, Philippine National Police, church, youth, schools, and the communities, will provide the necessary person-power.

The CZMC, a multi-sectoral group organized by GDFI in each of the aforementioned municipalities, will take the lead in environmental protection and policy reforms at the local level. It will also manage the

municipality's marine reserve and sanctuary. Each CZMC has a marine reserve monitoring team trained by GDFI to do simple monitoring activities.

Mapping and delineation of the boundaries is in May 1997. Michael Cusi of the Marine Biology Section, University of San Carlos University, Cebu City will head the team to provide technical assistance.

By **Margarita de la Cruz**
Guiuan Development Foundation, Inc.,
184 Zamora St., Tacloban City,
Leyte, Philippines



National Course on Integrated Coastal Management: Cebu

In line with the Coastal Resource Management Project's thrusts, CRMP jointly implemented the fifth National Course on Integrated Coastal Management (ICM), held from November 25 to December 6, 1996 at the Costabella Tropical Beach Hotel, Mactan Island, Cebu. Twenty-three participants representing five non-government organizations (NGO), four local government units (LGU), four government agencies, and two academic institutions from Bohol, Cebu and Negros Occidental took part in the training. The Learning Area Coordinators from these provinces and the Community Development Advisor of the project also participated.

The National Course on ICM has a nine-module curriculum. It aims to develop capacities in coastal management planning and implementation. The training course was

originally conceptualized, developed and implemented by six organizations (Department of Agriculture, Department of Environment and Natural Resources, 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) with financial assistance from the Rockefeller Brothers Fund and other partners.

Similar training courses will be implemented by CRMP in 1997 and 1998.

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



CRMP Policy Component

The Coastal Resource Management Project Policy Component kicked-off with its Coastal Resource Management (CRM) Policy Forum on 16-17 December 1996 at the Rembrandt Hotel in Quezon City. With the theme “Policy and Media: A Partnership for Coastal Resource Management”, the first policy forum brought together representatives from various government agencies, local government units (LGU), non-government organizations and the media in what was considered as an initial effort to formulate a set of jurisdictional guidelines for CRM and to drum up support for such guidelines through media.

The forum focused on emerging legal and jurisdictional issues that confront fisheries and coastal resource management and the organization of a Technical Working Group (TWG). The TWG will work on these issues to define an objective jurisdictional framework from which coastal management activities can be supported.

Activities on the first day consisted of presentations from the Bureau of Fisheries and Aquatic Resources (BFAR), National Coalition for Fisheries and Aquatic Reform (NACFAR), University of the Philippines-Marine Science Institute, Parks and Wildlife Bureau, and the Local Government Development Foundation. In the afternoon, participants were divided into four groups, each of which was requested to answer a set of queries and issues concerning legal and jurisdictional aspects of CRM which originated in the field. To ensure that the groups were well advised on the legalities of their answers, an environmental lawyer was assigned as an adviser to each group. On the second day, the TWG discussed approaches and inputs to the formulation of CRM jurisdictional guidelines.

The workshop outputs were remarkable in several aspects. First,

the answers to most of the legal questions were very consistent, indicating that there is a high degree of conformity on how many of the country’s laws on resource management should be properly applied. In effect, laws with clear-cut purposes and sufficiently clear applicability have been culled out and endorsed for appropriate situations in the light of the devolution of management responsibilities over municipal waters to local government units. The solicitation of questions from the field proved effective for identifying institutional and legal deficiencies in CRM. This process has now been infused into CRMP as a feedback mechanism known as the “CRM Hotline” (see page 35). Second, while deficiencies and inconsistencies were identified in some laws and mandates of agencies involved in coastal management, the corrective measures are not as complex as previously thought. The mere fact that a consensus was immediately reached among various agency delegates with varied disciplines and concerns on the need to refine some existing laws based on the merits of achieving sustainable use of resources is a positive indication of acceptance of CRM. Eventually, such a consensus is expected to foster greater collaboration among these agencies insofar as finalizing CRM jurisdictional guidelines under the CRMP is concerned. An outstanding feature of this policy forum is the partnership with media which is viewed not just in its traditional role in information dissemination but as a more proactive participant in advocacy.

Substantial inputs have already been generated, including a collation of existing laws applicable to coastal management as well as analytical abstracts of important provisions of the Local Government Code. Drawing upon the outcome of the first policy forum, CRMP, led by its policy advisor, Annabelle

Cruz-Trinidad, scheduled further workshops with the TWG to complete the process of its policy dialogues before working on the final CRM jurisdictional document and securing the endorsement of all concerned agencies in support of the guidelines.

The second meeting of the TWG was held on 28 January 1997 at the Department of Environment and Natural Resources’ (DENR) legislative conference room in Quezon City. In attendance were 33 representatives from various offices under the DENR, BFAR, the Department of Interior and Local Government, the Asian Institute of Journalism, NACFAR and staff of the CRMP.

Ms. Annabelle Cruz-Trinidad, assisted by Atty. Mikhail Maxino of the Silliman University and Benjamin Francisco of CRMP, steered the discussions towards the identification and clarification of legal and jurisdictional concerns on fisheries, mangroves, protected areas, pollution and waste management. The discussions focused on what agency representatives stressed as the proper interpretation of laws affecting coastal resource management in the light of the devolution of significant management functions previously being dispensed by national agencies to local governments.

Some of the more complex issues in CRM have been addressed in ways that are subtle and practical, while some issues that were seemingly simple had to be dissected lengthily.

Among the more salient items that were clarified are:

a. that the Local Government Code is not “self-operating” and that in order to execute its provisions, municipal ordinances have to be enacted;

b. LGUs should enforce fishery laws that are both locally enacted

and those which are expressly provided for in subsisting Fishery Administrative Orders;

c. that in spite of the fact that the authority to grant licenses for certain fishery resources have been devolved to LGUs, the national laws imposing controls in the exploitation of the same resources should be followed and be part of the conditions of the license;

d. the establishment of municipal fish sanctuaries do not need approval from the BFAR or the Secretary of the Department of Agriculture (DA), but the process of establishing the sanctuary can be patterned after a previous order issued by the DA;

e. the creation of Fisheries and Aquatic Resource Management Councils is mandatory but in the absence of penal provisions to the contrary, its immediate creation is not obligatory; and

f. that protected areas established under the National Integrated Protected Areas System (NIPAS) are considered to be outside of direct LGU jurisdiction.

On the other hand, some major issues needing further clarification, possibly through bilateral arbitration, include:

a) jurisdictional mandates and processes involving the management of coral reefs;

b) fine-tuning of NIPAS implementation insofar as LGU roles are concerned; and

c) the inter-generational equity issue regarding renewal of Fishpond Lease Agreements for another 25 years.

In the end, a very substantial segment of CRMP's policy agenda has been addressed and clarified. It can be said that the project's jurisdictional guidelines for CRM has taken a solid shape after this meeting. What remains to be done is to concretize the inputs into what the project sees as a user-friendly document for use by anyone involved in coastal resources management.

By **Annabelle Cruz-Trinidad**, CRM Policy Advisor, CRMP, PRIMEX, 502 Manila Luxury Condominium, Pearl Drive, Pasig City

CRM HOTLINE

Does a municipal ordinance banning the use of certain fishing gear within municipal waters need approval from the national agencies for the ordinance to be effective?

- No. The municipality/city may institute ordinances banning the use of certain fishing gear without approval from the national agencies. Sections 48 to 59 of Republic Act (RA) 7160 enumerate the step-by-step procedure in local law making vested to the Mayor and the *Sangguniang Bayan* (SB) and the manner of approving and validating local legislation by the *Sangguniang Panlalawigan* (SP) pursuant to Sections 54 and 56, respectively. While Section 534 (e) expressly repeals only Sections 2, 16 and 29 of Presidential Decree (PD) 704 and not Section 4, which provides for Department approval before any ordinance is passed, Section 534 (f) of the Local Government Code (LGC) states that "all general and special laws, acts, city charters, decrees, executive orders, proclamations and administrative regulations, or part or parts thereof which are inconsistent with any of the provisions of this Code are hereby repealed or modified accordingly." This provision thus, renders Section 4 of PD 704 irrelevant.
- Sec. 17 of the LGC clearly devolves the enforcement function to the appropriate Local Government Unit (LGU), i.e., "for a municipality: enforcement of fishery laws in municipal waters..." Sec. 149 further reinforces this capability by identifying the appropriate entity, the SB, specifying its powers and the mechanism to enforce such, via ordinances, to wit: "the SB shall, by appropriate ordinance, penalize the use of explosives, noxious or poisonous substances, electricity, muro-ami, and other deleterious methods of fishing and prescribe a criminal penalty in accordance with provisions of this code; the SB shall have the authority to prosecute any violation of applicable fishery laws."



Who has jurisdiction over areas designated as protected areas—the Protected Area Management Board (PAMB) (under the National Integrated Protected Areas System or NIPAS Act) or the LGU? In cases where the PAMB and the LGU do not agree on matters governing the protected areas, how should the conflict be resolved?

- The PAMB. Sec. 10 of RA 7586 (NIPAS ACT) provides for the administration and management of the NIPAS, "the NIPAS is hereby placed under the control and administration of the Department of Environment and Natural Resources (DENR). For this purpose, there is hereby created a division in the regional offices of the Department to be called the Protected Areas and Wildlife Division in regions where protected areas have been established, which shall be under the supervision of a Regional Technical Director, and shall include subordinate officers, clerks, and employees as may be proposed by the Secretary, duly approved by the Department of Budget and Management, and appropriated for by

See **HOTLINE** on p.36

HOTLINE from p.35

Congress.” Sec. 11 of the same provides for a Protected Area Management Board which shall be established for each protected area, the composition of which includes several nominees from various LGUs, including: a) one representative from the autonomous regional government, if applicable; the Provincial Development Officer; one representative from the municipal government; one representative from each *barangay* (village) covering the protected area; one representative from each tribal community, if applicable; and, at least three representatives from non-government organizations (NGO)/local community organizations, and if necessary, one representative from other departments or national government agencies involved in protected area management.

- Sec. 7 of Department Administrative Order (DAO) 25 (series of 1992), or the implementing rules and regulations for RA 7586, further provides for a two-tiered management planning, “NIPAS site management planning and implementation shall be undertaken by protected area staff, which may include an NGO component, by technical specialists and representatives of local communities within and near the site following a general planning strategy prepared at the national level. The protected area management plan shall be contained within a management manual as provided by Section 9 of the Act. Protected area management shall be under the direction of a site specific Protected Area Management Board as provided in Chapter V of this Order and NGOs are expected to play an important role in area management along with DENR staff.”
- Since majority of the composition of the PAMB members are representatives from LGUs and considering that the Board is mandated by law as the site-specific policy making body of protected areas, the LGUs have greater influence in the decision making process than the other representative groups. Therefore, the decision of the Board carries the majority vote of representatives from the LGUs.

Can the LGU create a fish sanctuary within its municipal waters without authority or approval from the DENR, Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR), or any other national agency?

- Yes, the LGU can create fish sanctuaries within its municipal waters without authority or approval from the DA-BFAR. LGC Sec. 3 states that “the LGU shall share with the National government the responsibility in the management and maintenance of ecological balance within their territorial jurisdiction subject to provisions of this code and national policies.” This can be done via specific ordinances. The LGU may seek technical assistance from DA-BFAR in establishing fish sanctuaries. DA General Memorandum Order No. 3 (series of 1990) provides for guidelines in the establishment of fish sanctuaries.
- In cases where the initiative to create a fish sanctuary emanates from the national government agency (NGA), permission has to be requested from the LGU as provided for by Sec. 27 of the LGC which states that “no project or program initiated by NGA shall be implemented unless approved by SB and appropriate consultations are made.”
- The establishment of fish sanctuaries within proclaimed protected seascapes (RA 7586) in municipal waters needs authorization from the PAMB.

Is there a law/regulation governing the establishment, utilization, and management of artificial reefs (AR) in municipal waters?

- None. However, a Joint DENR-DA-Department of Interior and Local Government-Department of National Defense Administrative Order (AO) is in the process of being signed by the four departments (DENR has signed the memo as of February 7, 1997) providing for a nationwide moratorium on artificial reef deployment pending formulation of policy guidelines. The moratorium will take effect for one year upon signing of the Joint AO.

What law can be used to control solid waste disposal (for example, coming from a poultry farm) and who should enforce this?

- The LGU should enforce policies pertaining to solid waste disposal. Sec. 17 (Basic Services and Facilities) of the LGC states that “Local government units shall endeavor to be self-reliant and shall continue exercising the powers and discharging the duties and functions currently vested upon them. They shall also discharge the functions and responsibilities of national agencies and offices devolved to them pursuant to this code. Such basic services and facilities include, for a *barangay*: services and facilities related to general hygiene and sanitation, beautification, and solid waste collection; for a municipality, solid waste disposal system or environmental management system and services or facilities related to general hygiene and sanitation.” The responsibility of cities and municipalities for providing an efficient system of collecting, transporting and disposing refuse is also provided for in Sec. 82 of PD 856 (Sanitation Code).

PD 856 (Sanitation Code) series of 1975, Chapter XVIII, provides for a system of refuse (inclusive of all solid waste products such as garbage, rubbish, ashes, manure, dead animals, street sweepings and industrial wastes) disposal.

For more information, please contact Annabelle Cruz-Trinidad, CRM Policy Advisor (02-6339052), or other advisors of the Coastal Resource Management Project.

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.

- 1997**
Wood, M. E. 1997. **New Directions in the Ecotourism Industry**, The Ecotourism Society Newsletter, First Quarter 1997, pp. 1-3.
- 1996**
A Guide in Local Environment Code Formulation. 1996. Local Government Development Foundation and Konrad Adenauer Foundation, Manila, Philippines. 89 p.
- Auster, Peter J. (1996). **The Impacts of Fishing Gear on Seafloor Habitats.** Sea Wind. 10(4):20-22.
- Brzeski, Veronica. 1996. **The Role of Communities in Coastal Resources Management in Indonesia.** Out of the Shell. 5(3):1-4.
- Burns, William C. 1996. **From the Lance to the Laboratory: The Impact of Anthropogenic Environmental Degradation.** Sea Wind. 10(2):2-7.
- Ferrer, E.M., L. Polotan-dela Cruz and M. Agoncillo-Domingo. 1996. **Seeds of Hope: A Collection of Case Studies on Community-based Coastal Resources Management in the Philippines.** College of Social Work and Community Development, University of the Philippines, Diliman, Quezon City, Philippines. 223 p.
- Hikkaduwa Special Area Management and Marine Sanctuary Coordination Committee. 1996. **Special Area Management Plan for Hikkaduwa Marine Sanctuary and Surrounding Area, Sri Lanka.** Coastal Resources Management Project, Coast Conservation Department, National Aquatic Resources Agency, Colombo, Sri Lanka. 78 p.
- Pajaro, M.G. and A.C.J. Vincent. (1996). **Seahorse Conservation in the Central Philippines: A Community-based Approach.** Sea Wind. 10(4):7-12.
- Pido, M.D., R.S. Pomeroy, M.B. Carlos and L.R. Garces. 1996. **A Handbook for Rapid Appraisal of Fisheries Management Systems** (Version 1). ICLARM Educ. Ser. 16, 85 p.
- Pilz, Jörg and J.V. Juario. 1996. **Establishing a Digital Coastal Environmental Information System (CEIS) for Cebu Province, Phase I.** UPV J. Nat. Sci. 1:72-89.
- Rekawa Special Area Management Coordinating Committee. 1996. **Special Area Management Plan for Rekawa Lagoon, Sri Lanka.** Coastal Resources Management Project, Coast Conservation Department, National Aquatic Resources Agency, Colombo, Sri Lanka, 81 p.
- Rufo, C.M., Jr., I.S. Valle, W. Matuguina, Jr. and H.P. Liew. 1996. **Pollution Management Guidebook for the Cement Industry.** PRC-Environmental Management, Inc. 37 p.
- Semira, M.P., Jr., C.M. Rufo, Jr., I.S. Valle and H.P. Liew. 1996. **Pollution Management Guidebook for the Pulp and Paper Industry.** PRC-Environmental Management, Inc. 34 p.
- Vogt, H.P. (1996). **The Economic Benefits of Tourism in the Marine Reserve of Apo Island, Philippines.** Sea Wind. 10(4):13-19.
- 1995**
Biodiversity Conservation Network. 1995. **Evaluating an Enterprise-Oriented Approach to Community-based Conservation in the Asia/Pacific Region, Annual Report: January 1-December 31, 1994.** The Biodiversity Support Program, Washington, D.C. 90 p.
- Edurese, J.L.H., L.Y. de Jesus and C.M. Rufo, Jr. (no date). **Pollution Management Guidebook for the Desiccated Coconut Industry.** PRC-Environmental Management, Inc., 32 p.
- Ganewatte, P., R.A.D.B. Samaranyake, J.I. Samarakoon, A.T. White and K. Haywood (eds) 1995. **The Coastal Environmental Profile of Rekawa Lagoon, Sri Lanka.** Coastal Resources Management Project, Colombo, Sri Lanka. 79 p.
- Lebrilla, R.B., C.M. Rufo, Jr. and C.S. Salazar. 1995. **Pollution Management Guidebook for the Tuna Fish Canning Industry.** PRC-Environmental Management, Inc. 35 p.
- Sullivan, K., L. De Silva, A.T. White and M. Wijeratne (eds). 1995. **Environmental Guidelines for Coastal Tourism Development in Sri Lanka.** Coastal Resources Management Project and Coast Conservation Department, Colombo, Sri Lanka, 78 p.
- Ubungen, S., Jr. and D.A.D. Diamante. 1995. **Livelihood Options for Coastal Communities.** International Institute of Rural Reconstruction, Silang, Cavite, Philippines. 77 p.
- 1994**
Industrial Environmental Management Project. 1994. **Pollution Management Guidebook for the Pig Farming Industry.** PRC-Environmental Management, Inc. 35 p.
- White, A.T., L.Z. Hale, Y. Renard and L. Cortesi (eds). 1994. **Collaborative and Community-based Management of Coral Reefs: Lessons from Experience.** Kumarian Press, Inc. Connecticut, USA. 130 p.
- 1993**
Pimentel, A.Q., Jr. 1993. **The Local Government Code of 1991: The Key to National Development.** Cacho Publishing House, Inc. 866 p.
- Shields, M. Dale and B.P. Thomas-Slyter. 1993. **ECOGEN Case Study Series, Gender, Class, Ecological Decline, and Livelihood Strategies: A Case Study of Siquijor Island, The Philippines.** Clark University and Virginia Polytechnic Institute and State University, USA. 52 p.

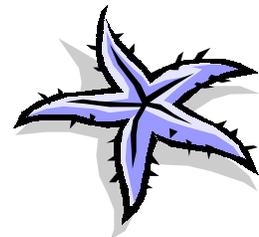


SELECTED CRMP PUBLICATIONS

- Coastal Resource Management Project (CRMP). 1996. **Proceedings from the Coastal Resource Leadership Challenge: Leadership Opportunities in Coastal Resource Management in Palawan.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 48-CRM/1996.
- Coastal Resource Management Project (CRMP). 1996. **Proceedings from the Coastal Resource Leadership Challenge: Leadership Opportunities in Coastal Resource Management in Malagal and Sarangani.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 47-CRM/1996.
- Coastal Resource Management Project (CRMP). 1996. **Proceedings from the Coastal Resource Leadership Challenge: Leadership Opportunities in Coastal Resource Management in Cebu, Bohol, and Negros Oriental.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 45-CRM/1996.
- Coastal Resource Management Project (CRMP). 1996. **Quarterly Progress Report No. 1.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 6. July 10. 7 p.
- Coastal Resource Management Project (CRMP). 1996. **Donor Coordination Progress Report.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 5. August 23. 6 p.
- Coastal Resource Management Project (CRMP). 1996. **First 15-Month Project Work Plan.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 2. August. 55 p.
- Coastal Resource Management Project (CRMP). 1996. **Life of Project Work Plan.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 1. August. 66 p.
- White, A.T. 1996. **Environmental Guidelines for Coastal Tourism Development in Tropical Asia.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 3. July 19. 18 p.
- White, A.T. and R.O.D. De Leon. 1996. **Mangrove Resource Decline in the Philippines: Government and Community Look for New Solutions.** CRMP/PRC Environmental Management, Inc. CRMP Document No. 4. August. 7 p.

UPCOMING CONFERENCES AND SEMINARS

- June 26-27, 1997. **Regional Workshop on Integrated Coastal Zone Environment Management.** Manila, Philippines. Contact: Dr. Rafael D. Guerrero III, Philippine Council for Aquatic and Marine Research and Development, Los Baños, Laguna, Philippines. Tel: (63-94) 5361582/5361574.
- July 20-26, 1997. **The International Coastal Zone Management Conference, CZ97.** Boston, Massachusetts. Contact: Dr. Martin C. Miller, USAE Waterways Experiment Station, Attn.: CEWES-CR-O, 3909 Halls Ferry Road, Vicksburg, MS 39180. Tel: 601-634-3999. E-mail: m.miller@cerc.wes.army.mil.
- August, 1997. **7th Stockholm Water Symposium, 3rd International Conference of the Environmental Management of Enclosed Coastal Seas (EMECS): With Rivers to the Sea.** Stockholm, Sweden. Contact: Stockholm Water Symposium/Stockholm Water Company, S-10636 Stockholm, Sweden. Fax: +4687362022. E-mail: sympos@sthwat.se
- August 9-15, 1997. **Charting the Future of Coastal Zone Management: The Next 25 Years.** Boston, Massachusetts. Contact: Dr. Martin C. Miller, USAE Waterways Experiment Station, ATTN: CEWES-CR-O, 3909 Halls Ferry Road, Vicksburg, MS 39180, USA.
- Fax: 601-634-4314. E-mail: MILLER@COAFS1.WES.ARMY.MIL. Web Site: <http://www.nos.noaa.gov/cz97/welcome.html>
- September 7-11, 1997. **Pacific Coasts and Ports '97.** Christchurch, New Zealand. Contact: John Lumsden, Conference Chairman, Centre for Advanced Engineering, University of Canterbury, Private Bag 4800, Christchurch, New Zealand. Tel: 64 3 364-2219. Fax: 64 3 364-2069. E-mail: j.lumsden@cae.canterbury.ac.nz. Web site: <http://www.cae.canterbury.ac.nz/coastal/pacific.html>
- September 8-11, 1997. **First International Symposium on Stock Enhancement and Sea Ranching.** Bergen, Norway. Contact: PUSH, Bontelabo 2, N-5003 Bergen, Norway. Tel: +47 55 317395. E-mail: borthen@telepost.no. Web Site: <http://www.irm.no/sear.hav97.html>
- September 22-27, 1997. **6th International Conference on Fluvial Sedimentology.** Cape Town, South Africa. Contact: The Conference Organizer, 6 ICFS, Postgraduate Conference Division, UCT Medical School, Observatory, 7925, South Africa. Tel: +27 21 406 6911. Fax: +27 21 448 6263. E-mail: sally@medicine.uct.ac.za
- October 10-13, 1997. **Third LOICZ Open Science Meeting: Global Change Science in the Coastal Zone.** Leeuwenhorst Conference Centre, Noordwijkerhout, The Netherlands. Contact: LOICZ Core Project Office, Netherlands Institute for Sea Research, P.O. Box 59, 1790 AB Den Burg, Texel, The Netherlands. Fax: 31-222 369430. E-mail: loicz@nioz.nl WWW Home Page: <http://www.nioz.nl/loicz/osmnot.htm>
- October, 1997. **MEDCOAST 97: The Third International Conference on the Mediterranean Coastal Environment.** Tunisia. Contact: MEDCOAST Secretariat, Middle East Technical University, 06531 Ankara, Turkey. Tel: 90 312 210 54 35. Fax: 90 312 210 14 12.



PUBLICATIONS ORDER LIST

Charting Papua New Guinea's Coastal Resource Development: Lessons from a Participatory Workshop and Coastal Resource Issues in Papua New Guinea: A Photo Text Collection. Available from Greenpeace Pacific, Private Mail Bag, Suva, Fiji, for US\$8.95 each or US\$14.95 for the pair. The latter can also be obtained from Tory Read, Greenpeace, 568 Howard Street, San Francisco, CA 94105. The first is a 67-page booklet that chronicles planning for, implementation of, and the follow-up to a workshop held in 1993. Its focus is human interactions. Environmental issues are given more attention in the second material, a 55-page booklet. For a copy of the proceedings of the PNG coastal resources management workshop, write to Biodiversity Support Program, 1250 24th Street NW, Washington, DC 20037 USA.

Marine/Coastal Biodiversity in the Tropical Island Pacific Region Vol. 1 Species Systematics and Information Management Priorities (Ed. J.E. Maragos, M.N.A. Peterson, L.G. Eldredge, J.E. Bardach, and H.F. Takeuchi) and Vol. 2 Population, Development and Conservation Priorities (Ed. L.G. Eldredge, J.E. Maragos, and P.L. Holthus). These are the proceedings of two workshops held in November 1994. Available from: Publication Sales Office, East-West Center, 1777 East-West Road, Honolulu, HI 96848, USA. Fax: 808-944-7376; E-mail: ewcbooks@ewc.bitnet

The Northwest Salmon Crisis: A Documentary History. 1996. Cone, J. and S. Ridlington (eds.). 384 pages. This book explores the cultural forces that have nearly brought to extinction salmon that gave run in the Columbia River Basin for thousands of years. Contact: Oregon State University Press, Dept. S-1, 101 Waldo Hall, Corvallis, OR 97331-6407. Tel: 541-737-3166. Fax: 541-737-3170. \$29.95 plus \$3.50 shipping and handling.

Coastal Zones of the Pacific: A Descriptive Atlas. 1996. Pacific Circle Consortium and Oregon Sea Grant. 160 pages. This book presents the environmental and human dimensions of life along the Pacific rim. It was developed for young people from 13-17 as a set of cross-cultural materials to empower readers to understand that ways of life of others

with whom they share the Pacific. Contact: Oregon Sea Grant, Oregon State University, 402 Administrative Services, Corvallis, OR 97331-2134. Tel: 541-737-2716. Fax: 541-737-2392. E-mail: ridlings@ccmail.orst.edu \$14.95 plus \$2.00 postage and handling.

El Planeta Platica: Eco Travels in Latin America. August issue will focus on coastal environmental issues. Contact: Ron E. Mader, Publisher, 12345 SW 18th Street #417, Miami, FL 33175. Tel: 305-221-5205. E-mail: Ron@txinfnet.com Web site: <http://www.planeta.com/>

Tidal Wetlands Restoration: A Scientific Perspective and Southern California Focus. 1996. J. Zedler. Publication No. T-038. This book reviews the problems that constrain wetlands restoration and recommends ways to improve planning and accelerate the development of ecosystems. Contact: California Sea Grant College System, Attn: Publications, University of California, 9500 Gilman Drive, San Diego, CA 92093-0232.

Disparities between Law and Practice in the Management of Hazardous Waste in the US and Mexico. 1996. The National Law Center and the Centro Juridico para el Comercio Interamericano (JURICI). Tel: 520-522-1200. E-mail: natlaw@ccit.arizona.edu Web site: <http://www.natlaw.com/>

IUCN Publications: For more information on IUCN publications, please contact: IUCN Publications Services Unit, 219c Huntingdon Road, Cambridge, CB3 0DL, UK, Tel: ++44 1223 277894; Fax: ++44 1223 277175, E-mail: iucn-psu@wcmc.org.uk <http://www.iucn.org>

Tourism, Ecotourism and Protected Areas. 1996. Ceballos-Lascurain, H.(ed.). xiv + 301 p. Derived from papers submitted at Parks Congress workshops, together with information from the World Tourism Organization, The Ecotourism Society, and the tourism industry. This book shows how tourism and protected areas can flourish alongside each other by guiding the development of tourism along lines which respect the limited capacity of many areas to absorb the pressure of

visitors and their activities. This book is an essential guide for protected area planners, managers and tourists alike. US\$30.00, Order No. B945.

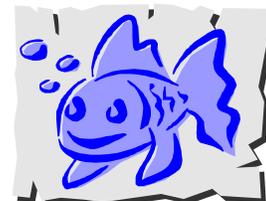
The Science of Conservation in the Coastal Zone. 1995. Agardy, Tundi. viii + 72 p. This work provides an overview of science-based marine protected areas together with contributed papers on individual experiences around the world. US\$10.00, Order No. B1007.

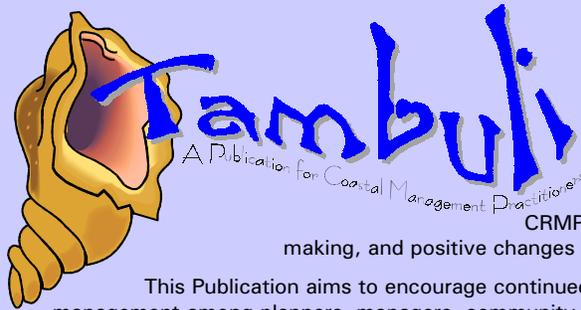
Global Climate Change and Coral Reefs. 1994. Wilkinson, C.R. and R.W. Buddemeier. x + 124 p. A global overview of the potential impacts of climate change and sea level rise on coral reefs, and of the implications of such impacts for ecological sustainable use of coral reefs. Includes information on the status and trends of reef conservation and use around the world, and suggestions for management of reefs in a changing world. US\$15.00, Order No. B1023.

Reefs at Risk. 1993. IUCN for the Global Task Team on the Implications of Climate Change for Coral Reefs. 24 p. An overview of the ecology and values of coral reefs, and of the global changes which are threatening reefs and the societies and species which depend on them. Focuses particularly on those changes expected to occur due to global warming, and describes the programme to establish a Long-Term Monitoring System of Coastal and Near-Shore Phenomena Related to Climate Change. US\$6.00, Order No. B766.

Guidelines for Developing a Coastal Zone Management Plan for Belize. 1993. Gibson, J. and A. Price in collaboration with the World Conservation Monitoring Centre. 9 full color maps with text. US\$25.00, Order No. B1040.

Guidelines for Establishing Marine Protected Areas. 1992. Kelleher, G. and R. Kenchington. 88 p. US\$10.00, Order No. B920.





TAMBULI: A PUBLICATION FOR COASTAL MANAGEMENT PRACTITIONERS is published biannually by the Coastal Resource Management Project, a five-year technical assistance project funded by the United States Agency for International Development (USAID), implemented by the Department of Environment and Natural Resources, and managed by PRC Environmental Management, Inc.

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**, 5th Floor, CFC Towers, North Reclamation Area, Cebu City, Cebu, Philippines. Tel. No. (63-32) 232-1821 to 23; Fax No.: (63-32) 232-1825; E-mail: prcceu@usc.edu.ph

TAMBULI is distributed without cost to all network members and others upon request.

This publication was made possible through support provided by the USAID under the terms of Contract No. AID 492-0444-C-00-6028-00. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID or PRC. Articles may be quoted or reproduced in other publications as long as proper reference is made to the source.

Editor: Alan T. White **Associate Editors:** Alexander G. Flor, Dolores Ariadne D. Diamante-Fabunan and Catherine A. Courtney.
Production and Artwork: Ysolde Collantes, Caridad Balisacan, M. Gale B. dela Cruz. Photographs are by the authors or as indicated.

Editorial Board

The Editorial Board Members will be coordinating submission of news items and major articles from their respective agencies or countries and serve as resource persons for future network activities.

Ms. Jessica Muñoz

Bureau of Fisheries and Aquatic Resources (BFAR)
Department of Agriculture (DA)
Arcadia Bldg., Quezon Blvd. Ext.
Quezon City
Philippines

Tel: (63-2) 9265428
Fax: (63-2) 9267790

Mr. Urbano Pilar

Program Coordinator
Coastal Environment Program (CEP)
Department of Environment and
Natural Resources (DENR)
Visayas Ave., Diliman, Quezon City
Philippines

Tel: (63-2) 9202211
Fax: (63-2) 9264826

Dr. Liana T. McManus

Program Coordinator
Community-based Coastal Resources
Management
Marine Science Institute, College of Science
University of the Philippines
Diliman, Quezon City
Philippines

Tel: (63-2) 9223921
Fax: (63-2) 9247678

Dr. Hilconida Calumpong

Marine Laboratory
Silliman University
Dumaguete City 6200, Negros Oriental
Philippines

Telefax: (63-35) 2252500

Mr. Stephen Olsen

Director
Coastal Resources Center
University of Rhode Island
Narragansett, RI, 02882
USA

Tel: (1-401) 8746224
Fax: (1-401) 7894670

Dr. Rokhmin Dahuri

Director
Centre for Coastal and Marine Resources Studies
Bogor Agricultural University
Gedung Marine Center Lantai 4, Fakultas Perikanan IPB
Indonesia

Tel: (62-251) 621086
Fax: (62-251) 625556

Dr. Rafael D. Guerrero III

Executive Director
Philippine Council for Aquatic and Marine Research
and Development (PCAMRD)
Los Baños, Laguna
Philippines

Telefax: (63-94) 5361582

Mr. Rathin Roy

Bay of Bengal Programme-FAO
91 St. Mary's Road
Abhiramapuram, Madras 600 018
India

Tel: (91-44) 4936294
Fax: (91-44) 4936102



