

# **PARTICIPATORY COASTAL RESOURCE ASSESSMENT**

**A Handbook for Community Workers  
and Coastal Resource Managers**

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# ***PREFACE***

This handbook has been developed to help integrate the knowledge of local coastal resource users with the understanding of scientific experts and thus maximize the effectiveness of integrated coastal resource management projects. It is based on work and research conducted by the authors in the Philippines and other countries in relation to various coastal resource management efforts and as doctoral students in geography and human ecology. It is also based on lessons from the implementation of participatory coastal resource assessment in San Vicente, Palawan and other areas as part of the Coastal Resource Management Project.

This handbook is intended primarily for community workers and coastal resource managers involved in community development for sustainable coastal resource use. It has two main purposes: first, to help community workers maximize the contribution they can make to initial coastal resource assessment and project monitoring and evaluation; and, second, to initiate, as early as possible, dialogue and input from community-level coastal resource users in a way that is relevant and meaningful to them.

The participatory coastal resource assessment methods described here will allow community workers to work with local fishers and other coastal resource users to generate valuable information for coastal resource management planning and implementation. This is done while simultaneously improving community participation and local empowerment. Though this handbook was developed to be as comprehensive as possible, practical constraints prevented the authors from covering all aspects of participatory coastal resource assessment. Any suggestions to improve this edition's usefulness and effectiveness would be most welcome.

# **ACKNOWLEDGMENTS**

Several persons contributed significantly to the development of this handbook. The authors especially acknowledge the precious time, effort and knowledge graciously given by the fishers of Honda, Ulugan and San Vicente Bays, Palawan during the testing and refinement of the participatory coastal resource assessment methods presented here.

Indeed, by itself, this handbook is a product of a collaborative process. The Puerto Princesa City Government, the Department of Agriculture-Agricultural Training Institute, Palawan; the Department of Environment and Natural Resources-Coastal Environment Program, Palawan; and Palawan-based non-governmental organizations such as the Ulugan Bay Foundation, Inc., were instrumental in completing the research. Participatory methodologies developed by Dr. Elmer Ferrer and Dr. Liana McManus inspired important aspects of the methods presented. Dr. Ron Senykoff and Dr. Fred Vande Vusse provided critical theoretical guidance and championed the applicability of participatory coastal resource assessment among donor and government agencies in the Philippines. Dr. Jefferson Fox provided essential technical guidance during the writing of the handbook. Dr. Hilconida Calumpong and Dr. Catherine Courtney facilitated funding and field testing of the methods, while Yasmin Arquiza assisted to refine the methods through additional field tests conducted in San Vicente, Palawan. Michael Alcala contributed lessons from field implementation in Negros Oriental.

In addition, the United States Agency for International Development supported this undertaking by sponsoring the Coastal Resource Management Project through Tetra Tech EM Inc. and a cooperative agreement with Silliman University. Equally significant were the contributions of the learning area coordinators for the Coastal Resource Management Project, Mr. Hermenegildo Cabangon in Sarangani Bay and Ms. Mel Tagudar-Corkum in Palawan, who helped organize training workshops to test the draft manual. The workshops were attended by 50 participants, whose inputs proved crucial to making the manual more relevant to “real world” tropical coastal environments in the Philippines. Ruperto Sievert developed Tables 2.3, 2.4 and 2.5 based on the results of the participatory coastal resource assessment in Palawan and in other learning areas while Evelyn Deguit developed the Socio-demographic Profile Questionnaire and the Sample Survey for Fishing Practices.

Dolores Ariadne D. Diamante-Fabunan designed the outline for the coastal environmental profile of the learning areas, assisted in technical editing and contributed in developing the final presentation of this handbook. Ms. Diamante-Fabunan, Ms. Deguit and Mr. Sievert are also actively involved in the conduct of the Participatory Coastal Resource Assessment in other project areas. Asuncion Sia edited while Ysolde Collantes and Mary Gale Bituin dela Cruz crafted the final presentation of this book.

Lastly, credit is due the rest of the project staff for their valuable and able support as well as our partners in coastal resource management including other fisherfolk for their continued cooperation.

#### **The Authors**

# ***ACRONYMS and ABBREVIATIONS***

CRM	coastal resource management
CRMP	Coastal Resource Management Project
CW	community worker
DA	Department of Agriculture
DA-ATI	Department of Agriculture-Agricultural Training Institute
DA-FSP	Department of Agriculture-Fisheries Sector Program
DENR	Department of Environment and Natural Resources
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
GPS	global positioning system
LGU	local (municipal, city and/or provincial) government unit
MARINA	Maritime Industry Authority
NAMRIA	National Mapping and Resource Information Agency
NGA	national government agency, e.g. DENR
NGO	non-governmental organization
PAGASA	Philippine Atmospheric, Geophysical, Astronomical Services Administration
PCRA	participatory coastal resource assessment
PCSD	Palawan Council for Sustainable Development
RDC	Regional Development Council or similar development authority

# ***DEFINITIONS***

*bahura*: a Tagalog word roughly corresponding to reef or shoal, any significant rise in the sea floor; depending on local usage, it may or may not indicate the presence of live coral.

*base map*: a predrawn map of selected features that serves to orient the mapper to the area and provides a consistent scale for the mapper to draw in additional features or elements of the coastal resource system.

*coastal area profile*: a document produced using various resource assessment and analysis techniques, including PCRA. It presents a variety of information required for effective decision-making and planning, including environmental and socioeconomic information, and analyses of problems and opportunities for sustainable coastal development.

*coastal habitat*: any ecologically distinct ecosystem that supports the production of coastal resources, including coral reefs, mangrove swamps, tidal flats, seagrass beds, and beaches.

*coastal resource*: any non-living or living natural product, such as finfish, marine invertebrates and aquatic plants, that is found in coastal areas and is of use or value to humans.

*coastal resource management (CRM)*: the wise use of coastal resources to promote and maintain sustainable development in coastal areas. CRM involves maximizing the utility of coastal resources by regulating human behavior and activities in coastal areas. Successful CRM requires multi-sectoral collaboration and strong community participation.

*coastal resource regime*: the system of rights and responsibilities that governs the use of coastal resources. Often, the operative or *de facto* regime is not the same as the legal or *de jure* regime. Despite a relatively well developed *de jure* regime of laws and regulations, the operative coastal resource regime in many areas of the Philippines is described as an open access regime, an unregulated free-for-all situation in which sustainable use is unlikely to occur.

*coastal resource system*: a diverse human-ecological system composed of all coastal habitats and the various aspects of coastal economies related to the production, distribution and consumption of coastal resources, as well as other products and economic activities derived from coastal resources.

*community worker (CW)*: any person involved in community organization or community development, usually associated with NGOs and LGUs.

*ground truthing*: field checking or verification of data.

*isdang bato*: a Tagalog term which in some areas refers to a variety of fish caught with hook and line on coralline and rocky reefs, usually including grunts, parrotfish, wrasses and emperors; a collective term referring to all those fish caught using hook and line which are not the most desirable or high-value species ("high-value species" generally refers to species such as groupers and snappers).

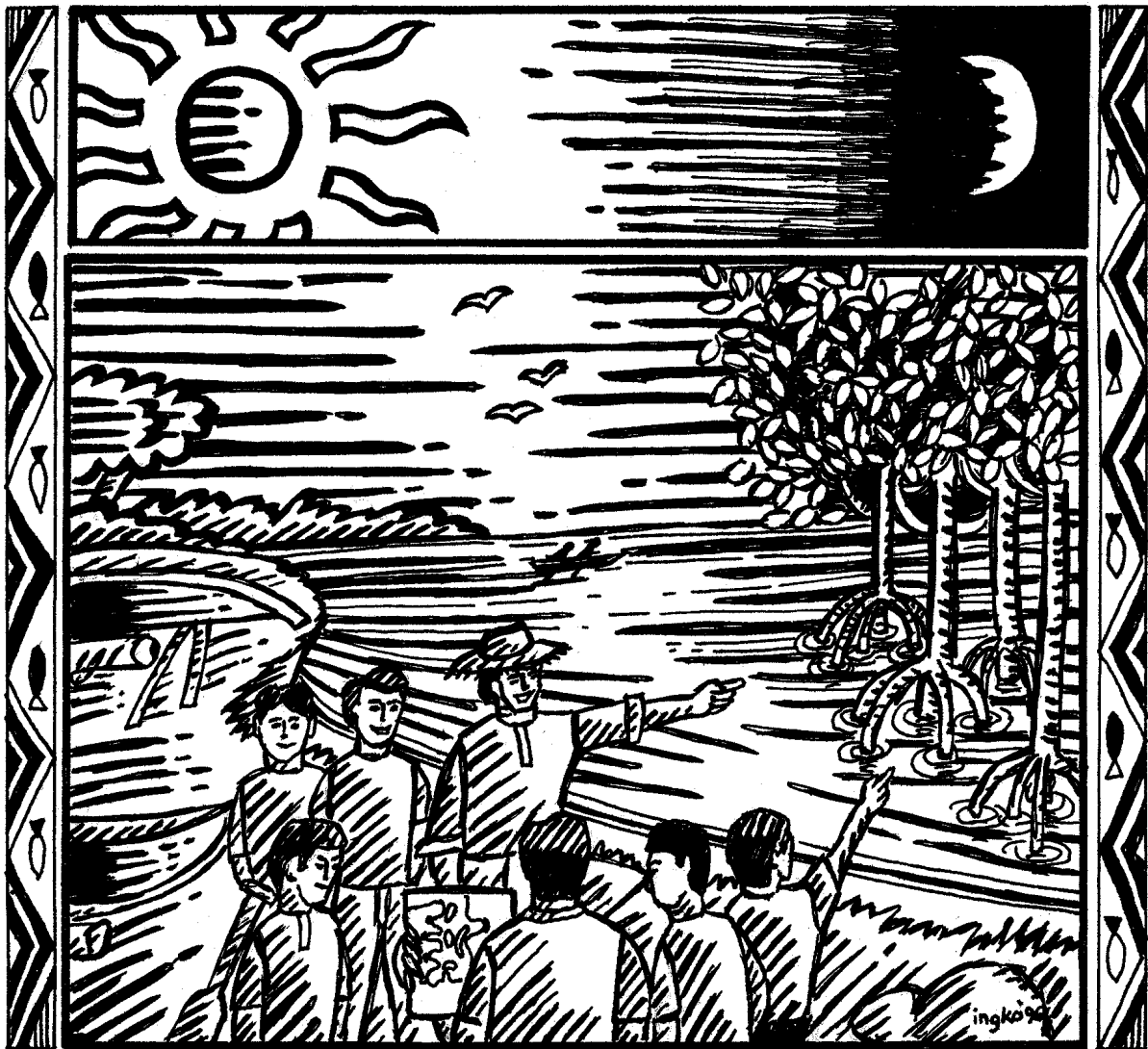
*local coastal resource users*: coastal residents who live in the management area, including municipal fishers and small-scale aquaculturists, whose primary basis of livelihood or subsistence involves capturing, harvesting or growing of any fishery resource; or deriving economic (cash and non-cash) benefit from coastal resources.

*participatory coastal resource assessment (PCRA)*: resource assessment accomplished with extensive participation and contributions from local coastal resource users.

*resource assessment*: the process of producing information required for effective resource management planning; a research process involving a variety of methods and techniques that allow a better understanding of environmental and social factors affecting coastal resource systems, and the elucidation of problems and opportunities for sustainable development in coastal areas. A resource assessment usually culminates in the production of a coastal area profile.

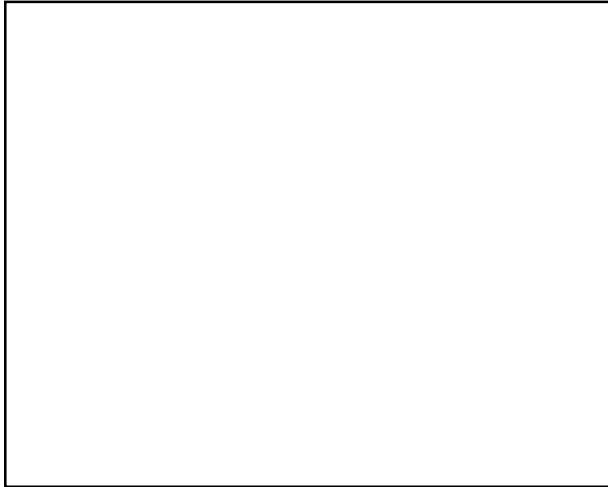
*yamang dagat*: a Tagalog term that literally translates as wealth or riches of the sea; frequently used when referring to coastal resources.

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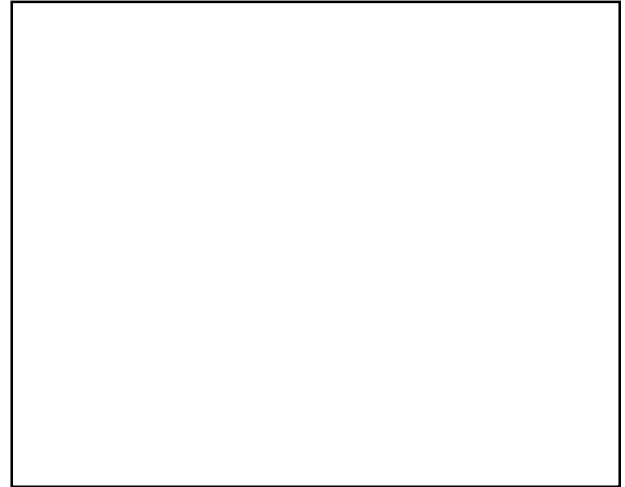


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*Residents all help pull a beach seine, Port Barton*



*Group participation and result, Ulugan Bay*

The essence of participatory coastal  
resource assessment is *learning by doing*.

The more that coastal resource  
stakeholders become involved in the  
assessment, planning and management  
process, the greater the opportunity for  
sustainable outcomes.

This publication and related ones such as the **Legal and Jurisdictional Guidebook for Coastal Resource Management in the Philippines** are available from the Coastal Resource Management Project, 5/F Cebu International Finance Corporation Towers, cor. J. Luna and Humabon Streets, North Reclamation Area, Cebu City, Tel. nos. 232-1821 to 22, 412-0487 to 89, 412-0645, Fax no. 232-1825, CRM Hotline 232-1823, E-mail [prccebu@usc.edu.ph](mailto:prccebu@usc.edu.ph). Website <http://www.oneocean.org>