





T H E C O M M O N M E T H O D O L O G Y F O R L E A R N I N G

A MANUAL *for* ASSESSING PROGRESS  
*in* COASTAL MANAGEMENT

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# FOREWORD

*At the March 1996 annual meeting of the International Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), the following “priority emerging issue” was identified:*

*There is an urgent need for an accepted integrated coastal management (ICM) evaluation methodology...When an evaluative framework is in place it will be possible to document trends, identify their likely causes and objectively estimate the relative contributions of ICM programs to observed social and environmental change.*

*This need became a theme at the International Workshop on ICM in Tropical Developing Countries: Lessons Learned from Successes and Failures, held in Xiamen, China, later that year.*

*The discussions in Xiamen led to an informal meeting in Paris in October 1996 organized by the United Nations Development Programme (UNDP) and the Swedish International Development Cooperation Agency (Sida), and hosted by the Intergovernmental Oceanographic Commission (IOC). At that meeting, 15 bilateral and multilateral donors further discussed the need for common methodologies for learning from the rapidly accumulating experience in the practice of coastal management worldwide. Since then the common methodology initiative has proceeded through a number of activities coordinated by the University of Rhode Island’s Coastal Resources Center (CRC) with the support of Sida, UNDP, the Global Environmental Facility (GEF) and the U.S. Agency for International*

*Development (USAID). The objectives of the initiative are to:*

- 1) Develop and apply concepts and tools that facilitate analysis across coastal management (CM) initiatives*
- 2) Clarify the conceptual frameworks upon which CM initiatives are based*
- 3) Analyze hypotheses on how sustained progress is achieved*
- 4) Better document progress towards an improved governance process and the impacts of CM upon the condition of coastal ecosystems and coastal societies*
- 5) Enhance local and national ownership of CM initiatives*

*To date, the initiative has produced a survey of the purposes and methods for evaluating CM projects and programs funded by international donors (Olsen, Lowry and Tobey, 1997) and has tested prototype evaluative instruments in a diversity of settings.*

*This manual is another step in an effort to develop and make accessible approaches to assess progress towards CM goals and learn from experience. An earlier draft was presented and reviewed at a Consultative Meeting of International Experts held at the Coastal Resources Center of the University of Rhode Island on March 23-25, 1998.*

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# PART ONE

## INTRODUCTION TO THE SELF-ASSESSMENT MANUAL

### 1) THE NATURE OF THE CHALLENGE

**W**hy is there an urgent need to evaluate coastal management (CM) initiatives and to develop an accepted evaluation methodology? First, because the transformation of coastal regions is of vital importance to our species. Almost half of the world's population lives within 150 km of a coastline (Cohen et al., 1997) and the percentage is expected to increase in coming decades because of continued rapid population growth and migration to coastal areas (World Bank, 1996). Yet, these coastal regions encompass less than 20 percent of the inhabitable land space. Coastal areas attract the human population because they are focal points for economic growth. Coastal regions claim 12 of the world's 15 largest cities and probably contain more than half of humanity's infrastructure for manufacturing, transportation, energy processing, tourism, communications and other services, and a similarly large share of global consumption and waste products.

A second reason to systematically evaluate CM initiatives is that global trends show a decline in the qualities

*“Between the years 1990 and 2010, over a billion people in developing countries will move from rural areas to large cities. At the turn of the century about a quarter of the population of developing countries will live in about 300 cities with a population of more than a million people, and 50 of these will have a population of more than four million people. Approximately 80 percent of the world's largest cities are in developing countries. Most of these cities are located on the coast.”*

*(Sida, 1997)*

of coastal regions that are important to human quality of life. High population growth combined with increasing poverty in some regions and increased consumption in others has led to large-scale deterioration of coastal environments and conflicts over a failing resource base in many areas of the world. The pressures produced by a growing population are expected to increase, as will the manifestations of overuse and misuse of the coastal resources. As CM practitioners, we are all familiar with the symptoms of declining water quality, degradation or destruction of critical habitats, decline and collapse of fisheries, and losses in biodiversity. We know that these problems contribute to increased user conflicts. Declining coastal conditions and intensifying user conflicts are also posing severe tests to governments at all levels.

A third reason to systematically evaluate and learn from CM initiatives is that the existing successes are as yet small compared to the worldwide forces causing coastal degradation. In the tropics, where the pace of coastal change is most rapid, coastal management is currently conceived and implemented as a scattering of pilot projects. There is little communication between projects or analysis of the differences in their designs and impacts.

# 1



*If coastal management is to have significant global impact on the conditions of coastal ecosystems, the lessons of effective projects and programs will have to be more rapidly identified and disseminated.*

## MANAGEMENT OR GOVERNANCE?

*Coastal management is the term used to name the work described in this manual. But the manual recognizes that ‘management’ alone is not enough to meet the challenges posed by ecosystem and social change along the world’s coastlines. The term ‘governance’ often better defines the work that is the subject of this manual.*

*Management is the process by which human and material resources are organized to achieve a known goal within a known institutional structure. Thus, management typically refers to organizing the routine work of a unit of a company or a governmental agency.*

*Governance is the process by which policies, laws and institutions address the issues of concern to a society. Governance questions the fundamental goals, and the institutional processes and structures that are the basis of planning and decisionmaking. Governance sets the stage within which management occurs.*

*The successes and failures of current coastal management efforts are often undocumented. Drawing lessons from this growing body of experience has been slow and*

*difficult. There are few readily available documents that analyze how the differences in program design and implementation are influencing outcomes. Countries around the world are looking for successful models of CM. All those concerned need to learn from one another’s experience and develop features of CM programs that work successfully. If we are to increase the ratio of success to failure, we need to know what works, what does not work, and why.*

*The number of CM initiatives in developing countries that have succeeded in making the transition from planning to implementation remains small. Anecdotal descriptions of experience point to inadequacies in the capacity of local institutions and in the design of the first steps of a governance process. However, without accepted CM evaluation frameworks it is difficult to engage in systematic assessment of the adequacy of governance activities. In developed countries, such as the United States, coastal management programs have brought a measure of order and predictability to coastal development, and very large investments have led to the restoration of some qualities in selected estuaries and the Great Lakes.*

## 2) MANAGEMENT CAPACITY ASSESSMENT

*Evaluations of coastal management initiatives can be grouped into three major types (Olsen et al., 1997a):*

- *Performance evaluation*
- *Outcome assessment*
- *Management capacity assessment*

*Performance evaluations address the quality of project implementation, and the degree to which project goals are achieved. Outcome assessments evaluate the*

impacts of a CM initiative upon coastal resources and/or the associated human society(s). Management capacity assessments are conducted to determine the adequacy of management structures and governance processes as these relate to generally accepted international standards and experience. The purpose is to improve project design and make adjustments to the internal workings of a project or program. Management capacity assessment is the subject of this manual.

The information revealed in a management capacity assessment can identify the program adjustments that better align structure and activities to objectives. This is termed 'instrumental learning.' In as complex an undertaking as CM, the 'errors' to be detected usually have to do with insuring that project or program management strategies are implemented effectively. Effectiveness and efficiency involve skillful adaptation rather than faithful allegiance to a planning 'blueprint.' Capacity assessments address the quality of project design and the quality of the implementation effort.

Assessment of the management of complex ecosystems subject to significant human pressures requires appropriate scientific tools and sound knowledge. The natural sciences are vital to understanding ecosystem function, and social sciences are essential to elucidating the origin of human-induced problems and in finding appropriate solutions (GESAMP, 1996). It is therefore essential that science has clearly defined roles within the planning process. Science can be used to help characterize problems over time and rank management priorities; unravel the causes to specific environmental problems and select protective actions; understand ecological systems in order to develop sound policy options and justify management decisions; and, monitor existing conditions in order to evaluate the effectiveness of policies and attainment of plan objectives.

## EVALUATION THEMES IDENTIFIED IN THE DONOR SURVEY

- Human capacity
- Governmental commitment
- Participatory planning, decisionmaking and management
- Institutional structure
- Public education and awareness
- Program administration
- Sustainability
- Use of scientific information
- Clear roles and responsibilities
- Assessment of conditions and trends
- Policy framework / legislative mechanisms
- Conflict resolution
- Monitoring and evaluation
- Traditional attitudes, uses and rights
- Transfer of knowledge / experience
- Issue analysis
- Public disclosure

This manual builds upon the management capacity questions assembled in the UNDP-supported survey of evaluation types and the questions being posed by international donors when they assess coastal management projects and programs (Olsen et al., 1997a). Some 19 donor agencies and international organizations were contacted in the survey. This manual poses those questions that are most useful to defining the maturity and capacity of a given project or program as it relates to each of the elements of the CM development cycle.

What are the benefits of a common approach to management capacity assessment? Clearly linking project or program activities with national priorities, demonstrating forward progress, and highlighting accomplishments creates a sense of common purpose, hope, ownership and accountability. The use of common approaches to management capacity assessment could become important to countries when they are defining their agendas with donors and when working to achieve greater consistency among CM-related activities within their boundaries. Thus, an accepted approach to management capacity assessment can promote greater ownership of CM initiatives by governments and local stakeholders. This goal is increasingly recognized and recommended in a diversity of international forums, such as the first General Assembly of the Global Environment Facility (New Delhi, April 1-3, 1998). This, in turn, promotes accountability among those funding, designing and implementing these initiatives. The specific objectives of this manual are to:

- Provide a simple conceptual framework upon which to base project design, and the agenda for periodic self-assessments
- Assist in tracking forward progress in CM, in both specific nations and globally
- Promote learning across projects, advance transfer of knowledge, and increase replication of good practices
- Help make external evaluations a positive process that promotes learning for CM program staff, funders and the people they serve.

### 3) THE COASTAL MANAGEMENT POLICY AND PROGRAM CYCLE

It is widely accepted that the process by which CM projects or programs evolve can be described as a policy or project development cycle with the same features as other institutional endeavors (see GESAMP, 1996). This cycle has been described as having the following steps:

- Identification and analysis of national, regional or local coastal issues (Step 1)
- Plan or program preparation (Step 2)
- Formal adoption and funding (Step 3)
- Implementation (Step 4)
- Evaluation (Step 5)

The CM cycle places the many actions of a program or project in a development sequence and helps unravel the complex interrelationships among the many elements of CM. Experience shows that certain features must be in place for a CM project or program to be sustainable and to successfully progress toward its long-term goals. In this sense, the steps listed above provide a simplified 'road map' to a complex, dynamic and adaptive process.

The CM cycle is the organizing framework for this manual. Evaluative instruments based on the framework have been successfully tested in the field in UNDP/GEF final project evaluations in Patagonia, Cuba and Belize (Olsen and Tobey, 1997; Olsen et al., 1997c; Olsen and Ngoile, 1998).

Priority actions associated with each step of the CM development cycle are shown in Table 1.

It must be recognized that the inherent complexity of CM often makes it difficult or impractical to proceed in

**Table 1: Essential Actions Associated with the Steps of the CM Cycle**

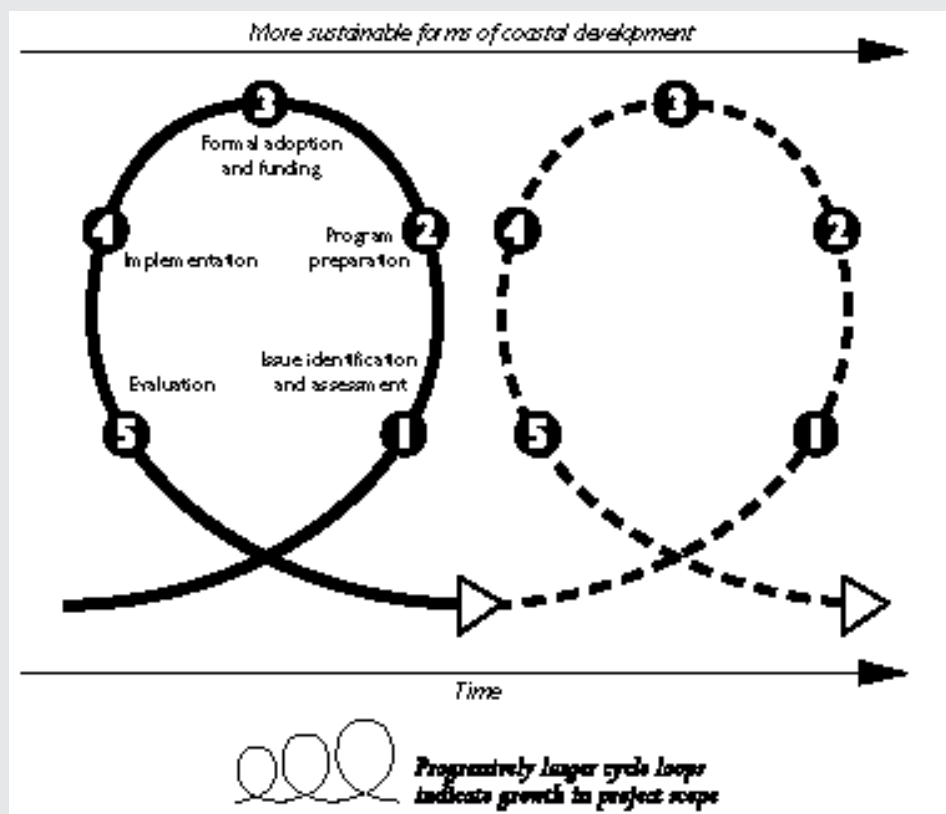
Step	Priority Actions
<p>Step 1: Issue Identification and Assessment</p>	<p><i>Assess the principal environmental, social and institutional issues and their implications.</i></p> <p><i>Identify the major stakeholders and their interests.</i></p> <p><i>Invite review and response to the assessment.</i></p> <p><i>Select the issues upon which the management initiative will focus its efforts.</i></p> <p><i>Define the goals of the management initiative.</i></p>
<p>Step 2: Preparation of the Plan</p>	<p><i>Conduct scientific research targeted at selected management questions.</i></p> <p><i>Document baseline conditions.</i></p> <p><i>Conduct a public education program and involve stakeholders in the planning process.</i></p> <p><i>Develop the management plan and the institutional framework by which it will be implemented.</i></p> <p><i>Create staff and institutional capacity for implementation.</i></p> <p><i>Test implementation strategies at a pilot scale.</i></p>
<p>Step 3: Formal Adoption and Funding</p>	<p><i>Obtain governmental mandate for a planning and policy formulation process.</i></p> <p><i>Obtain formal endorsement of policies/plan and the authorities necessary for their implementation.</i></p> <p><i>Obtain the funding required for program implementation.</i></p>
<p>Step 4: Implementation</p>	<p><i>Modify the strategies of the program as needed.</i></p> <p><i>Promote compliance with program policies.</i></p> <p><i>Strengthen institutional frameworks and legal authority for management.</i></p> <p><i>Implement mechanisms for interagency coordination.</i></p> <p><i>Strengthen program staffs' technical and administrative capacity.</i></p> <p><i>Catalyze the construction and maintenance of necessary physical infrastructure.</i></p> <p><i>Sustain participation of major stakeholder groups.</i></p> <p><i>Implement conflict resolution procedures.</i></p> <p><i>Maintain the program's priority on the public agenda.</i></p> <p><i>Monitor performance and societal/ecosystem trends.</i></p>
<p>Step 5: Evaluation</p>	<p><i>Assess the program's impacts on the management issues being addressed.</i></p> <p><i>Adapt the program to its own experience and to changing social and environmental conditions.</i></p> <p><i>Conduct external evaluations at major junctures in the program's evolution.</i></p>

Source: Adapted from GESAMP, 1996 and Olsen et al. 1997.

Figure 1.

### The steps of the coastal management cycle.

The dynamic nature of coastal management requires feedback among the steps and may alter the sequence, or require repetition of some steps (adopted from GESAMP 1996).



Source: Adapted from GESAMP, 1996, as found in Olsen et al. 1998

as orderly a manner as Table 1 would suggest. Yet one of the five steps will characterize a given project or program's operations at a given time. Sometimes the steps are taken in a different order. For example, a law that mandates a CM program may be enacted before the specific issues to be addressed have been analyzed or a set of policies and implementing plan have been developed. In such cases, beginning at Step 3 may be necessary or expedient for any number of reasons. However, those responsible for the program will need

to return to Steps 1 and 2 before they can make the new law operational. They may then find that the legislation is lacking and requires amendment and that the efficiency of the overall process may have been compromised by taking the steps out of order.

"Generations" of the Policy or Program Cycle. Global and regional experience demonstrates that CM projects or programs mature through the successive completion of management cycles. CM programs in a range of developed and developing nations suggest that completion of an initial cycle at a national scale typically requires eight to 15 years but can be completed in half this time at the scale of a demonstration project for a single bay or urban area. Each cycle may be termed a "generation" of a CM project or program (Figure 1). The first cycle usually begins with a few urgent issues, often in a confined geographic area. Through adaptive learning over successive cycles, the geographic scale of the program is increased and new and

more complex issues are addressed.

Just as it is useful to identify which step in the process best characterizes a program at a given time, it is also useful to differentiate between first generation, and more mature efforts. The tendency to ignore previous efforts to achieve the goals of coastal management contradicts a learning-based approach. In many places, several attempts have been made to launch a program but the initiative has floundered in Step 3 (formal

adoption and funding) or failed to make the transition to Step 4 (implementation). Such previous experience is always instructive and should be carefully examined.

*The Sequence of Coastal Management Outcomes.*  
 In designing a framework for learning from CM experi-

ence it is essential to recognize the time that it takes to complete a sequence of CM cycles and achieve the ultimate goals of (1) sustainable quality of life in coastal communities, and (2)

sustainable well-being of coastal ecosystems. The sequence may be visualized as first, second and third order intermediate outcomes as shown in Figure 2.

Experience with mature CM programs suggests that it often takes a sustained effort measured in decades and spanning several generations of a given

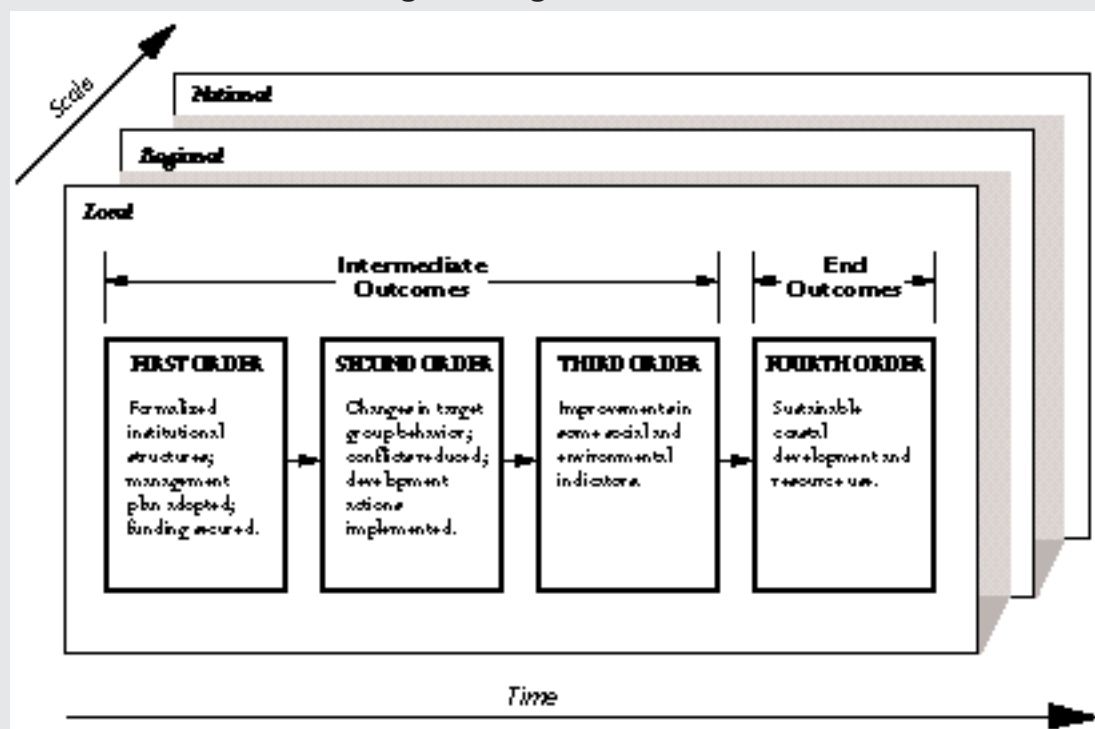
program, to achieve tangible expression of third order outcomes and occasionally the end goal at a significant geographic scale—for example, a province, state or nation. This time scale is beyond the duration of the majority of programs and projects currently funded by multilateral development banks or international donors.

This manual focuses primarily on first and second order

outcomes of CM programs. The emphasis is on the quality of project design and implementation. An emphasis on first and second order outcomes reflects the maturity of most current coastal projects and programs.

Figure 2.

### Ordering coastal governance outcomes.



Source: Adapted from USEPA 1994.

Third order outcomes are the initial targeted changes in resource and socioeconomic conditions, such as reduction in coastal erosion rates and improvements in certain elements of quality of life of coastal residents. Fourth order outcomes refer to the attributes of broader long-term sustainable development of coastal communities. In the tropics, where the pace of coastal change is most rapid, some coastal management initiatives are achieving second and third order outcomes at

# PART TWO

## SELF-ASSESSMENT QUESTIONS

### 1) HOW THE SELF-ASSESSMENT QUESTIONS ARE STRUCTURED

*The assessment questions are divided into five sections. Each of the five sections corresponds to a step in the cycle of coastal management development. Each of the five sections is further sub-divided into the topics most important to that step in the cycle. Under each topic, a series of questions are listed. Each question focuses on some aspect of 'good practice' associated with the design and implementation of coastal management projects or programs at different geographic scales.*

*Not all the questions are relevant to all projects or programs, and the topics that should be addressed for a given self-assessment need to be carefully selected. There are a total of 126 questions in 26 categories. The great diversity in the maturity and scales of coastal management initiatives means that some topics, and some questions, will be much more relevant than others for a given program at a given time in its evolution.*

*Some of the 'good practices' that are reflected in the questions in the manual are widely accepted among practitioners of coastal management. Others are less widely tested and are offered here as hypotheses about 'good practices' that require further testing and refinement.*

*Accompanying each of the individual steps is text explaining why the question is deemed to be relevant,*

*the types of information sought and, in the case of some questions, the types of judgments that can be made. For example, Section 4 (Program Implementation) includes the following question: "Do staff responsible for implementation of the management strategy understand it? Were they involved in its design?"*

*Experience demonstrates that the quality of implementation tends to be directly related to the degree of staff commitment to a management strategy, such as the administration of a coastal setback regulation in erosion-prone areas, or dedication to the principles of transparent behavior in a controversial decisionmaking process. Staff commitment is highly correlated with their understanding of the intentions of the strategy. Such understanding and commitment increases the probability that the management strategy will be carried out as intended and that needed adaptations will be made when required. Hence, activities that increase staff understanding and commitment and promote accountability are among the 'good practices' that are the focus of the manual.*

### 2) WHO SHOULD USE THE MANUAL

*The manual is intended for project or program managers, staff, donor agency personnel, people organizing training programs and staff of non-governmental organizations involved in CM initiatives. The primary intended use is for self-assessment, but the manual can also be used as a project design checklist, as a framework for training, or as a methodology for tracking the*

# GOOD PRACTICE GUIDELINES FOR INITIATING AND SUSTAINING EFFECTIVE COASTAL MANAGEMENT

*USAID, through the Coastal Resources Management Project, implemented by the URI Coastal Resources Center, has identified ICM practices that have proven to be successful and can be adapted to the unique qualities of different nations and sites.*

*1) Recognize that coastal management is primarily concerned with the processes of governance.*

*2) Work at both the national and local levels, with strong linkages between levels.*

*3) Develop an open, participatory and democratic process, with opportunities for all stakeholders to contribute to planning and implementation.*

*4) Build programs around issues that have been identified through an inclusive participatory process.*

*5) Build constituencies that support effective coastal management by informing the public about the long-term implications of the issues that are being addressed and demonstrating the benefits of improved management.*

*6) Utilize the best available information for planning and decisionmaking. Good coastal management programs understand and address the management implications of scientific knowledge.*

*7) Commit to building national capacity through short- and long-term training, learning-by-doing and cultivating host country colleagues who can forge long-term partnerships based on shared values.*

*8) Complete the loop between planning and implementation as quickly and frequently as possible, using small projects that demonstrate the effectiveness of innovative policies.*

*9) Recognize that programs undergo cycles of development, implementation and refinement, building on prior successes and adapting and expanding to address new or more complex issues.*

*10) Set specific targets, monitor and assess performance.*

*Source: USAID, 1997.*



maturity and the capacity of a CM project or program. It can therefore also be used to structure elements of performance evaluations and outcome evaluations.

### 3) HOWTO USE THE MANUAL

The primary purpose of this manual is diagnostic. It is intended as an aid to program stakeholders in organizing program assessment activities. This manual is based on several assumptions:

- Coastal management projects or programs vary in the issues they address, the management techniques they employ, the spatial scales they encompass and the socio-political context in which they operate
- It is possible to identify the attributes of coastal governance that are central to sustained progress towards coastal management goals
- The manual can help identify conditions in projects and programs that lead to sub-optimal performance
- Identifying potential performance problems is a first step in a learning process that leads to project or program adjustments

Whenever applying this manual to a specific program, it is essential to recognize that each question in each relevant step need not be answered. The task of answering so many questions would be daunting and would promote superficial answers rather than the probing analysis and reflection that a learning-based approach to CM requires. The manual is therefore offered as a guide and not as a 'blueprint' that is relevant to all situations. Selecting what questions are relevant and useful as the basis of an analysis requires detailed knowledge of the initiative.

External reviewers will not usually have such detailed knowledge. The specific questions that need to be addressed therefore need to be negotiated with the project leaders, funders—and perhaps other important stakeholders—before a peer assessment or external evaluation gets underway.

When diagnosing program or project strengths and weaknesses, the manual may be used in one or more of the following ways:

*Self-Assessment.* One way to organize a self-assessment is to conduct a staff workshop. The first step is to identify which questions are relevant to their program or project. Examining the explicit basis for rejecting certain questions as irrelevant also can help in better understanding the project or program. Sessions would be scheduled for pre-selected sets of questions. Staff would use the questions as a framework for discussion of the strengths and weaknesses of their project or program. Such internal self-assessments can, and usually should, be expanded to include external stakeholders and the public. It can be useful to invite those who should be benefiting from the program and/or collaborating institutions, groups and consultants to discuss and help reflect upon the topics that have been selected and on the progress of the CM initiative as a whole.

Having an outsider's perspective on the project can also be useful and takes on the features of a peer review. An external reviewer can be a coastal management official from a donor agency or another country, a well-respected NGO official or coastal management specialist selected to provide a diversity of views and experience. Because outsiders are likely to be less familiar with the project, an optimal approach is to have project staff prepare written responses to a mutually agreed-upon set of the questions. The report

becomes a basis for further questions and discussions among project officials and the peer review team. Such peer reviews should always include opportunities for the review team to meet with stakeholders within government and those impacted or benefiting from the project. Public workshops may in some cases also be appropriate.

Whatever the form, a self-assessment should end with a written summary of the major findings and conclusions. That summary should be made available to those who have participated. In some projects, such self-assessments are the basis for drawing up an operational work plan and budget for the following year. Where this form of adaptive management is practiced, the funding agency and the relevant governmental representatives should participate in the assessment process.

*External Evaluations.* The manual can be used as the basis for an external evaluation by donor agencies or others. The logic of external assessment is similar to that of peer review: Questions that are to be the focus of the assessment are selected from the manual; a written response is developed by staff, or arrangements for an oral presentation are made. External evaluations tend to be more formal than management capacity assessments and typically emphasize an analysis of the project or program's performance in reference to its official objectives and expectations. Where management capacity assessment is one of the topics addressed, this manual can be useful. Sometimes there are interesting differences in the conclusions that emerge from performance and capacity analysis. For example, a project may have done a good job of meeting the targets called for by the project design, but may have done poorly in meeting some of the 'good practices' called for by this manual. The differences between the two can be instructive and help

identify what adjustments to project design and administration are most likely to be useful.

*Training.* The manual can be used as a framework for training. The questions can be used as a framework for presentations of 'good practice.' Training participants can discuss the relevance of the questions to their experience and how they would respond to them in a given situation.

*Project Design.* The conceptual framework and 'good practices' embedded in the manual can be used to guide the design of projects. Initial field testing of elements of this manual through the final external evaluations of CM initiatives sponsored by the Global Environment Facility (GEF) in Latin America and the Caribbean has demonstrated its usefulness in shaping the design of follow-on projects. By applying a consistent and explicit set of evaluative standards, these evaluations were able to identify specific strengths and weaknesses, and locate each project in the policy cycle. This was very useful in setting priorities for further investments in the program and identifying what modifications were deemed appropriate to the design and administration of each project. We believe that the manual can also be useful when designing new initiatives where coastal management has not yet been attempted.

# BACKGROUND INFORMATION SHEET

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Date of assessment: \_\_\_\_\_

<i>Name of individual(s) performing assessment:</i>	<i>Title and responsibility:</i>

Name of management effort: \_\_\_\_\_

Scope of project or program:

- Geographic coverage \_\_\_\_\_
- Annual and total budget \_\_\_\_\_
- Funding sources \_\_\_\_\_

Institution responsible for implementing the coastal management effort: \_\_\_\_\_

Previous coastal management initiatives in the province (state) and for nation: \_\_\_\_\_

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Concurrent coastal management initiatives in the province (state) and/or nation: \_\_\_\_\_

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# STEP ONE

## ISSUE IDENTIFICATION AND ASSESSMENT

### Overview of Step One

Coastal management (CM) is a set of activities designed to maintain and improve the quality of coastal ecosystems and the human societies they support. Nothing is more critical to the success of a given generation of CM than the selection of the issues – both the problems and the opportunities – that a coastal management initiative will address. Early on, successful projects negotiate an agreement amongst stakeholders, both in and out of government, on the major issues that require improved management and the specific objectives of the project. Step One ends when the issues and the geographic areas that will be the subject of subsequent planning, research and the framing of management actions are defined.

In many cases this important step is skipped over quickly. For example, when the catalyst for initiating CM is funds made available by international donors, the topics and the approach to CM may be pre-selected because they are of interest to the donor. Yet, if the agencies of government that will ultimately be responsible for implementing CM actions or the people that will be affected by such management have little influence on what issues are selected, the prospects for the success of the CM initiative are likely to be compromised.

An issue identification process is often based on pre-existing information that may be supplemented by 'rapid assessment' techniques that provide a snapshot

of environmental and social conditions in the areas being considered for a management initiative.

However, a longer, more detailed analysis involving the identification of coastal problems, their causes and possible remedies by local stakeholders, leaders and officials is preferable.

The major actions that should be undertaken in Step One are:

### Step 1: Issue Identification and Assessment

#### Priority Actions:

- Assess the principal environmental, social and institutional issues and their implications.
- Identify the major stakeholders and their interests.
- Invite review and response to the assessment.
- Select the issues upon which the management initiative will focus its efforts.
- Define the goals of the management initiative.

# 1

Two essential threads are put in place in Step One that should become central to the initiative as it proceeds through planning, implementation and evaluation. These are an issue-driven analytical process and the active involvement of the program's stakeholders. Without a dedicated constituency, no CM initiative can be sustained. Similarly, CM is so complex and potentially all-encompassing that a strategic focus on a limited set of carefully selected issues is essential to success.

## Questions

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### A. Coastal Issue Identification and Assessment

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A1. What coastal management issues are of concern to this project or program?

Major categories of coastal issues include: conflicts among different user groups; protection and conservation of important ecosystem processes, features and biodiversity; coastal hazards or impacts of natural forces such as shore erosion, river flooding and ocean storms on coastal use activities and structures; issues related to development needs and opportunities such as mariculture, dam building, tourism, ports development and facility siting; and, social issues such as poverty, unemployment, public health problems, and conflicts among ethnic groups, the rich and the poor.

The majority of CM projects are initiated as a response to the deterioration of coastal resource supplies or conditions. These typically are expressed as losses in such important habitats as coral reefs and mangroves, threats to public health and livelihoods brought about by declining water quality, the inappropriate siting of infrastructure, losses in biodiversity, etc. Such resource

conditions usually develop over many years and it can be illuminating when an issue analysis provides historical perspective on the causes of misuse and over-use.

A2. What triggered this coastal management initiative and how did this influence the selection of the issues that the project is addressing?

Was the project or program a governmental initiative and if so, what agency or individuals championed this initiative? What were their motivations? Was CM triggered by a crisis, or was it the culmination of a long process of growing awareness? If this CM initiative was a response to the availability of funds from an international donor, how did the donor's interests and experience influence the issue selection process?

A3. Has an assessment been prepared? Who prepared the assessment and who funded the effort?

What was the composition of the assessment team? Was the assessment made by specialists from a governmental agency, NGO or university? Did a foreign team define and select the issues?

A4. Who participated in the assessment? How did such participation occur?

In what specific ways was the identification and ranking of issues influenced by who participated and how such participation was structured? Did the assessment team visit the coastal sites of concern or remain in the capital city? Have coastal user perceptions of important CM issues been considered? Answers to such questions can provide important insights into the ownership of the program and the degree of local commitment.

A5. To what extent does the assessment address the social and economic conditions of coastal users?

Does the analysis identify how such issues as poverty, employment opportunities, the status of coastal infrastructure, income distribution and similar conditions contribute to environmental issues and the political context within which the CM initiative will play out? How have these forces influenced the selection of the issues upon which the CM program will focus?

A6. Was an analysis made of current relationships between agencies of government and other institutions and the priority coastal management issues? What did this analysis reveal about the adequacy of existing management?

Does the assessment identify the roles and responsibilities of governmental agencies as they relate to important social and environmental issues? Has the institutional capability and credibility for addressing important CM issues been evaluated? Have the interests and political influence of those institutions most directly involved in priority social and environmental issues been acknowledged? How have these realities affected the proposed agenda of the CM program?

A7. Are gender issues analyzed in the assessment?

Does the assessment differentiate among coastal women and men? A gender-disaggregated assessment should analyze the differences between how men and women segregate roles and responsibilities and how they are each affected by coastal issues and the coastal development

process. Which activities are done by women and by men? How is access, control and ownership of resources allocated among men and women? What are the differences in their access of local organizations and to political processes? What are the differences between the priorities of women and men? How do women and men vary in their knowledge of, and influence over, coastal issues?

A8. What was the technical scope of the issue assessment?

What types of technical analyses were conducted? Does the assessment rely on existing, secondary information? Is the assessment based on a rapid appraisal process? Are historical

trends identified and documented where pertinent data exists? Does the analysis consider local expressions of problems and opportunities in isolation or does it link them to pressures and opportunities at a larger scale? Does the analysis identify data gaps and areas of concern that were not well understood?

#### Box 1:

##### *Priority Issues and Relationships Between Government Agencies*

In 1986, Sri Lanka's Coast Conservation Department convened a four-day workshop on the management of coastal habitats to which representatives from all government agencies exercising jurisdiction over one or more types of habitats (dunes, estuaries, sea grass beds, reefs, wetlands, mangroves, etc.) were invited. Representatives of non-governmental organizations also participated. Working in facilitated sessions, the 40 representatives sought to reach consensus on the major threats to each type of resource, existing management responsibilities, significant management 'gaps' or weaknesses, needed management initiatives and significant information needs for each type of resource. This workshop provided the basis for framing the issues, policies and initial actions incorporated into one of the chapters of the 1989 Coastal Management Plan.

A9. How well tailored is the depth of the assessment to the scope, resources and time constraints under which the program was operating at the time?

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## B. Major Stakeholder Groups and Their Interests

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B1. What are the major non-governmental stakeholder groups in the coastal regions that are likely to be affected by this coastal management initiative?

What groups are most affected by the condition and use of the coastal ecosystems and the natural resources that may be affected by a CM initiative? If CM is successful, what groups are most likely to reap the benefits and what groups are most likely to feel that their interests are threatened? It is often the poorer segments of society that benefit the least from the modernization of economies, and their concerns and perspectives may not be easy to hear or to understand. In some cases, those who are benefiting monetarily and/or politically from prevailing patterns of

resource exploitation will be reluctant to articulate their interests and their concerns for how a resource management initiative may affect their behavior.

Those preparing an issue assessment are frequently under intense pressure to complete their work quickly. The time and the opportunities for consultation is often severely limited. It therefore becomes very important to question whether those who purport to represent specific interest groups – such as fishermen, shrimp farmers or traditional users of wetlands – accurately articulate the often diverse concerns of their constituents. It is very difficult to evaluate the limitations of such consultation unless those participating have

a long-standing familiarity with local conditions and local politics.

B2. Were the views of unorganized interests and the perceptions of the general public solicited during the issue assessment process?

### Box 2:

#### Essential Elements of a Profile

What is the current condition of the ecosystem? Characterize significant habitats, species and biological communities. Identify trends in the condition and use of resources and consider the short-term and long-term implications of such changes for the environment and or society. Identify specific sites where resource problems and management opportunities are particularly important.

What is the quality of life in the area? Assess material indicators (income, nutrition, housing, education, etc.), as well as intangible indicators such as people's hopes, dreams and fears for the future. What is on people's minds? What issues are the local media covering?

What is the institutional context for management of the resource area? What are the roles and responsibilities of government agencies for resource management? Are existing agencies prepared to address the emerging resource management issues? How have management roles changed through time? Are there traditional forms of resource management that may be relevant to contemporary problems? Assess the ability of institutions to address current and future management issues based on their technical capabilities and public credibility.

Source: The Coastal Resources Center, 1998.

How did this occur, and what was learned? For example, participatory rapid appraisal techniques encourage a quick analysis of the perceptions of the public and some user groups. The techniques used range from structured household surveys to more open-ended public meetings and workshops. The manner in which such surveys and public events were organized, where they were held and therefore who participated can provide important insights when interpreting the conclusions that were drawn.

B3. What governmental agencies and other formally constituted institutions – such as universities, user groups, and religious organizations – have an interest in the condition and use of the coastal ecosystems being considered?

How well did the assessment bring together disparate or conflicting interests? Were stakeholders and opinion leaders involved at the local level as well as within central government? How did this occur?

How were these interests analyzed? In first generation programs, conflicts among institutions are often dominant factors that constrain the scope of management efforts and the perceived political feasibility of particular management techniques. Very often, however, an initial issue analysis gives scant attention to these issues. Their importance may only be appreciated when formal

approval of the plan or program (Step Three) is being sought. An analysis of institutional issues should go beyond institutional diagrams and cataloging the responsibilities of the different agencies and explicitly address issues of institutional capacity, inter-institutional jurisdictional conflicts and other, potentially sensitive topics.

### Box 3:

#### *Sida Marine Coastal Zone Initiative*

*“All phases of a coastal zone management programme must be broadly participatory, with the majority of the initiatives originating from the stakeholders. Participation must be extensive enough to develop community trust and a constituency which supports the programme. It is critical that local stakeholders have a primary role in planning and implementing site- and resource-specific coastal zone management efforts. Otherwise, the prospects for successful implementation are dramatically reduced.”*

*Source: Swedish International Development Cooperation Agency, 1997.*

B4. Has there been consultation with people whose lives will be affected by the project, and what attention has been given to women in this process?

It is important early on to seek both men’s and women’s opinions and identify their interests as they relate to coastal resource management. What are the likely positive or adverse impacts of the project on

women? What social, legal and cultural obstacles could prevent women from participating in the project?

B5. Did the assessment process identify potential leaders and the stakeholder groups whose involvement should be a priority as the program unfolds?

The assessment process should identify both those who are most likely to support a CM initiative and those who are most likely to oppose it. The power and influence of these groups will often become most evident during the formalization of the program (Step Three) and its implementation (Step Four). The ultimate success of the project often depends in good measure on



the identification of these interests at the very beginning of the project and thinking through strategies for dealing with these differences during the planning process.

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### C. Issue Selection

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*C1. What coastal issues has the project selected as the focus for its efforts?*

*How were these issues chosen? By whom? Issue selection is the most critical decision in Step One. The issues that are selected as a project's focus will be the primary determinant of the physical boundaries as well as the topics that the planning process will encompass in Step Two. They need to be sufficiently tractable to offer good opportunities for making positive progress in the near term, and yet significant enough to command the interest and the commitment of the people affected and the agencies of government that will need to be involved.*

*C2. Are the scope and complexity of the issues that have been selected appropriate to*

*the capacity of the institutions involved and the project team?*

*One of the most frequent mistakes in coastal management initiatives, particularly in developing nations, is that the issues selected outstrip the capacity of the*

*institutions and staff that will carry the initiative forward through to implementation. It is far better to do a few things well than many things poorly. Is forward progress on the issues selected achievable with the staff, funding and time that is available?*

*C3. Is a planning and policy formulation process on the issues that have been selected likely to produce proposals of enough significance to gain formal approval and the resources for implementation?*

*It is essential at this early stage of a project to think through*

*the implications of gaining the requisite political support required for formal adoption and the resources that will*

#### Box 4:

##### Issue Selection

*In Sri Lanka's first generation coastal management plan, initiated in 1983, the issue identification process was conducted primarily by staff of the Coast Conservation Department (CCD). Among all the potential coastal resource management problems, CCD staff chose to emphasize coastal erosion, degradation and depletion of coastal habitats and loss of significant historic, cultural and scenic resources in coastal areas. Coastal erosion was an obvious choice because it was part of the historic mandate of the department. With substantial engineering expertise already in place in the department and broad public recognition that coastal erosion constituted a significant problem, erosion control was a clear priority. Habitat management and the protection of cultural and historic sites were viewed as difficult, but potentially 'tractable' problems over which the CCD could exercise some influence through a regulatory program in the narrow (300 m) coastal zone identified in the Coast Conservation Act. Other important coastal concerns, such as industrial discharges in estuaries, were viewed as outside the expertise and management capacity of the department. However, coastal water quality was added in the second-generation plan.*

Box 5:

*An Assessment of Management Issues Affecting the Lagoons of the Mosquito Coast*

The coastal management project in the Mosquito coast of Nicaragua focused initially on the management of two large lagoons. The process of issue identification began with a series of workshops that drew together representatives from the villages around each of the lagoons. Timelines were prepared that identified major changes in the condition and use of each lagoon. 'Talking maps' were drawn that identified such features as the location of seagrass beds, prime fishing areas, areas of rapid sedimentation and conflicts among fishers from different villages. Mikupia, a local NGO, and representatives of the Nicaraguan fisheries agency agreed to work together to gather data on harvests of fish and shrimp.

The completed assessment presents a historical perspective of the condition and use of resources in the region and a more detailed examination of the

issues posed by overfishing, sedimentation and habitat destruction in the two lagoons. The content and conclusions of a draft version of the assessment was first reviewed and modified at community workshops and then at a gathering that drew together representatives of regional and central government. This produced a consensus on both the nature of the problems and the first set of actions that should be taken that was summarized in a two-page statement entitled "The Biwi Manifesto." The Manifesto was signed by community leaders, representatives of regional and central government, and other respected figures in the community. The assessment set the stage for an initial management plan that will build upon traditional decisionmaking and resource management practices to confront today's problems.

Source: Coastal Resources Center, 1998.

be required for implementation (Step Three). Are the relevant authorities sufficiently interested in these issues? Do they believe a plan or program to address them is desirable and politically viable? How strong is their commitment to follow through? What interest groups and/or governmental institutions are likely to resist a change in how these

issues are addressed? Have likely sources of funds, and the other resources been identified that will be required to implement a plan or program directed at these issues?

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*D. Reactions to the Issue Assessment Process*

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*D1. How was the assessment reviewed for technical quality?*

*Who reviewed the issue assessment for technical quality? Do technical specialists regard the analysis as sound? Was there a formal review process that involved stakeholder groups and government agencies? Did the review process affect which issues were selected or the manner in which they would be addressed during a more formal planning process?*

*D2. To whom and in what form were the results of the assessment presented?*

*Was a profile or similar document produced and widely distributed? Did the assessment elicit press coverage, and if so, was such coverage accurate? Was it favorable?*

*D3. What responses did the issue assessment process elicit?*

*Is there official support for action on priority issues that have been selected as the focus of this project or program? Do the people most directly affected by the management issues identified support the findings? Do they feel that their own perceptions of the major management issue have been recognized?*

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## *E. Goals of the Coastal Management Project or Program*

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*E1. To what extent do the proposed project or program goals reflect the issues that have been identified?*

*What are the formal goals of the project or program? Do they reflect all the issues that have been identified? How comprehensive are they? How realistic are they, given the resources and expertise of the coastal man-*

*agement agency – and the political, economic and social context within which the project or program operates?*

*E2. Is the purpose of this coastal management initiative understood by those who are likely to be affected by it?*

*In what specific terms is the fundamental purpose of this CM initiative being communicated? Is there any evidence that some stakeholders – both within government and the public – are confused or misinformed about what the project or program hopes to accomplish?*

# STEP TWO

## PREPARATION OF THE PLAN

### Overview of Step Two

*In Step Two, the CM project develops a detailed plan of action to address the issues selected in Step One. Specific objectives, management policies and management actions are articulated for each of the issues selected. Research is undertaken to fill knowledge gaps judged to be most important to better understanding of the issues selected. Early implementation actions are vital at this stage to discover the feasibility of management techniques and strategies that are being contemplated. Pilot scale actions can bring attention and credibility to a project when they demonstrate that meaningful action is indeed possible.*

*The essential actions in Step Two are:*

### **Step 2: Preparation of the Plan**

#### Priority Actions:

- Conduct scientific research targeted at selected management questions.
- Document baseline conditions.
- Conduct a public education program and involve stakeholders in the planning process.
- Develop the management plan and the institutional framework by which it will be implemented.
- Create staff and institutional capacity for implementation.
- Test implementation strategies at a pilot scale.

*While an issue analysis (Step One) can be conducted rapidly, preparation of the plan (Step Two) requires a more protracted planning process that often extends over three to five years. Whatever the scale of the effort, the planning process requires contributions from both technical specialists and stakeholders.*

# 2

*In Step Two, the constituency building process initiated through the issue identification process in Step One gathers strength. This should be coordinated by a sequence of investments that build capacity to practice CM at both the community level and at higher scales (the state/province and/or the nation). The public education program that is shaped in this step should also be sustained and adjusted throughout the life of the program.*

## Questions

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### A. Documentation of Baseline Conditions

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*A1. What specific baseline studies have been conducted?*

#### Box 6:

##### Baseline Studies

*For a community-level project in Bentenan and Tumbak, Indonesia, socioeconomic and environmental baseline studies were conducted. The studies collected basic household demographic information, types of household-productive activities, fishing practices, and attitudes toward resource use activities. In addition, the entire coastline of the two villages was surveyed and divided into 12 transect stations for detailed fish census and reef surveys. Two trash surveys along the beachfront were also conducted.*

*Source: Pollnac, et al., 1997.*

*Have baseline conditions been documented that detail the condition and use of the ecosystems that are pertinent to the issues that have been selected? Have the*

*social, economic and governance processes that apply to the selected issues also been documented? Has gender-disaggregated baseline data been collected?*

*A2. Did the public and/or specific stakeholder groups participate in documenting baseline conditions?*

*A3. Are the baselines considered to be adequate as the basis for analyzing future change in the social and environmental variables of interest to the project?*

*What are the prospects for relating such future change to the efforts of the coastal management project? Have control sites been considered or planned as the basis of a future analysis of project impacts?*

### B. Essential Research

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*B1. What studies have been conducted?*

*What questions does the research seek to answer? How have CM issues shaped the research agenda? Is the scale of research appropriate to the issues identified and to program needs?*

*Research on selected issues of concern may include interviews, literature reviews, remote-sensing studies, and fieldwork to describe and map significant coastal resources and uses and to determine which uses, functions and values are important for each region.*

*What is the balance between research on environmental issues and the social, economic and institutional dimensions of the issues upon which the plan will focus?*

### Box 7:

#### *Research on Key Issues Addressed by the Patagonia Coastal Management Plan*

*An important element of the three-year UNDP/GEF project in Patagonia, Argentina was research. The objective of the project was to preserve Patagonia's spectacular concentrations of large marine birds and mammals along a 3,000-km coastline stretching from the northern boundary of the province of Rio Negro to the Straits of Magellan. Examples of research activities included:*

- *An on-board biologist observer program to collect data on nearshore fisheries*
- *A study of the impacts of whale watching on whale behavior*
- *A mobile pollution sampling van for gathering water contamination data in the municipalities*
- *A GIS map system with information on resource uses, threats and biodiversity 'hot spots'*
- *Technical reports on the distribution and abundance of marine bird and mammal colonies*

*Some CM projects have focused too much on 'science' that has proved to be peripheral to effective management practice and too little on governance processes; others have done the reverse. Research and technical tools (vulnerability assessments, GIS analysis, technical studies, surveys and inventories), for example, are of little value if the institutional and societal context in*

### Box 8:

#### *GESAMP Statement on Science and Integrated Coastal Management*

*"Despite great differences in the social, economic and ecological conditions in countries, there is remarkable consistency in the lessons learned about the contributions of science to ICM. They demonstrate that scientists and managers must work together as a team if scientific information generated for ICM is to be relevant and properly applied for management purposes. Since the two professions have different perspectives and imperatives and approach the solution of problems differently, the objectives and priorities for programs must be derived, tested and periodically re-evaluated by scientists and managers working together."*

*Source: GESAMP, 1996.*

*which they are introduced cannot absorb the insights that such tools can provide. Creative thinking on alternative approaches to institutional design can be of central importance since these issues often dominate debate over the project during the formalization process (Step Three).*

*Judgments on what research and what technology will be most useful and appropriate in a given setting is best made by managers and scientists working together through all the steps in the CM process.*

*B2. Is the initiative benefiting from research that has been designed to fill important gaps in the analysis of the selected management issues?*

*How will the results of the research be used? Is such research likely to produce information and insights that will be important to the formulation of the plan?*

*B3. Who is conducting the research?*

*Does the research involve local specialists? Does it build upon existing research? Have outside experts been selected where their specialized knowledge and experience will add the greatest value? Are such outside experts mentoring local scientists and working to upgrade local capabilities in research on CM issues?*

*B4. Are the public and stakeholders involved in research projects?*

*Are they being informed of research findings and their potential implications?*

*B5. Is experience from other coastal management initiatives in the region being analyzed and incorporated?*

*Too often CM initiatives within a single country or even the same province or state are designed and implemented in isolation. Is relevant experience from concurrent projects being considered? Is the project or program building on previous attempts to address the same issues?*

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## *C. The Management Plan*

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*C1. What is the 'logic' or 'theory' that underlies the design of the major management initiatives in the management plan?*

*CM policies, plans and laws should be based on an explicit theory about how activities are to be managed so that adverse impacts are reduced, hazards minimized, resources protected and sound development*

*encouraged. This question is intended to elicit information about the assumptions upon which the management plan rests. For example, a permit system designed to minimize coastal erosion by governing the types and siting of coastal uses such as hotels is based on a set of assumptions. It assumes that relevant impact-generating uses or activities have been identified and made subject to the permit; that coastal users are aware of the permit system and will apply for a permit if one is required; that permit information about potential impacts of the proposed use at that site is sufficient for staff to make informed decisions; that staff will attach appropriate conditions to permits if needed to mitigate adverse impacts; that applicants will comply with all conditions, etc. Close examination of the assumptions of the strategy will help identify possible implementation problems.*

*The 'validity' of the management strategy refers to the degree to which it is based on an adequate technical understanding of the causal linkages among human activities and adverse coastal conditions.*

*C2. At what groups or individuals is management directed?*

*Management activities are designed to change the behavior of coastal users: the manufacturer whose plant dumps untreated wastes in coastal estuaries, the hotel owner who wants to build in a coastal flood zone, or the person harvesting coral reefs to convert to lime. Management may be designed to educate the user, to provide incentives to encourage appropriate uses or to regulate behavior.*

*Is the plan designed, for example, to encourage the formation of user groups among fisherfolk? Is it aimed at fisherfolk in general? Fisherfolk using traditional meth-*

ods? Those fishing at particular sites? Those using motorized boats and modern gear? Clarity about whose behavior is to be modified by the management strategy can help identify potential implementation problems.

C3. Is the management strategy gender-sensitive?

Does it address strategies for reducing or overcoming gender-based barriers to access, participation and benefit distribution? Does it address strategies for increasing or maximizing gender-based opportunities (e.g., training, communication activities, extension, etc.)?

C4. What changes in target group behavior are sought in the management strategy?

How significant are the behavioral changes that are being sought? Research demonstrates that the greater the behavioral change, the more difficult it is to achieve. For example, small-scale fisherfolk may be more willing to change the type of gear they use than to change their profession.

Similarly, it is usually easier to control the volume and location of sand mining than to prohibit it altogether. Management strategies that build on the user's self-

interest or encourage modest changes in behavior are more likely to be successful than those that are perceived as dramatic, costly, punitive or unfair.

C5. Does the management strategy balance regulatory and non-regulatory actions?

Have the governmental institutions that will be involved in the application of such management tools as well as the user groups that will be affected by them been consulted? Have a range of options been evaluated by which the program's policies can be implemented? Does implementation combine, for example, economic incentives (e.g., user fees and charges, resource pricing, subsidies); regulatory instruments (e.g., zoning, setbacks, permitting, emission standards); and non-regulatory processes (conflict resolution mechanisms, reviews, negotiations, public hearings, voluntary agreements)?

C6. What inducements are offered to or costs imposed on target groups in the

management strategy?

Generally, compliance with policies is directly propor-

#### Box 9:

##### Management Actions

In Sri Lanka, the erosion management strategy relies on a mix of management tools, including regulation, education, and public investment in infrastructure:

- Regulation of the siting of coastal structures (the designation of variable setback lines within which construction is closely regulated)
- Regulation of beach sand mining (limits on the sites, amounts and methods for extracting sand)
- Beach nourishment at selected sites
- Building of groins, revetments and other coast protection structures
- Analysis and regulation of boat harbors or docks that would inhibit long-shore sand transport
- Prohibition of coral mining
- Education of hotel developers and others who would build in coastal areas on the importance of careful consideration of the impacts of coastal structures on coastal erosion.



tional to the risk of detection and the costs of non-compliance. Analysis of how compliance is enforced (and whether it is enforced) and the costs of non-compliance can be helpful in assessing the longer-term effectiveness of the management strategy. For example, prohibiting coral mining in Sri Lanka proved to be a difficult management strategy for protecting reefs because the lack of cooperation by local police made the costs of enforcement high and the costs of non-compliance low.

C7. Are the scope and complexity of the plan appropriate to the capacity of the institutions that will be responsible for its implementation?

Have the institutions that will be responsible for the actions being proposed by the plan been identified? Are they participating actively in the planning process? How confident do they feel that they have the capacity and the tools to implement the policies and actions? Are there constituencies within government and the public that will work to make implementation successful?

C8. Are the proposed boundaries for planning and management appropriate to the issues that have been selected?

Ideally, establishing a CM boundary is done during the planning process based on the issues that have been identified. In practice, however, boundaries are sometimes specified in law that was established prior to systematic issue identification. Coastal boundaries are sometimes arbitrarily defined zones (e.g., 1,000 yards in California or 300 m in Sri Lanka), based on natural or man-made coastal features (e.g., a highway) or specified according to coastal issues or processes (e.g., a coastal watershed).

For programs that rely primarily on regulatory approaches to management, the boundaries of the program's jurisdiction can be very important. Where programs have a stronger focus on promoting appropriate forms of development, conflict resolution and education, boundaries are less critical.

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### *D. Institutional and Legal Structure and Decisionmaking Processes for Plan Implementation*

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D1. Has an institutional framework been designed for implementation of the plan?

Project managers need a plan to institutionalize the management strategies they develop and implement in a resource area. Selecting an institutional design is a delicate process, and requires sensitivity to local traditions and power structures. There are always a multitude of management agencies, often with overlapping jurisdictions, and all concerned about their survival and their institutional 'territory.' Resource management projects must find an institutional niche that provides enough power to accomplish their mission and goals while collaborating successfully with pre-existing governmental agencies.

Will the implementation of the plan depend primarily upon a single institution or a coordinated effort by a number of institutions? Has the lead institution been identified? What is the degree of support for the institutional framework for plan implementation?

D2. Does the institutional design provide for linkages in policy formulation and decisionmaking at the local level and in central government or

provincial government?

Is the allocation of responsibility at different levels appropriate and workable?

D3. Is the legal authority for management adequate?

Effective CM programs provide for the regulation of some types of impact-generating activities. This question directs attention to the legal basis for such regulatory authority. Does it allow for the regulation of all relevant activities? Are the proposed penalties adequate to encourage compliance? If the program features the coordination of existing agencies, does it have power of assembly and how will it motivate such collaboration? Are the incentives to collaborate sufficient to expect effective progress?

D4. To what extent does the management strategy rely on the cooperation of other management agencies?

In some coastal programs, management authority is divided or allocated among several agencies. Research on coastal resources, for example, may be the responsibility of an agency other than the one charged with regulatory authority.

Are there barriers to effective interagency cooperation? Have incentives been developed to encourage interagency cooperation or coordination? Are additional funds, staff or other resources made available? Have formal or informal arrangements for coordination been established? Coordinating committees for specific resources, such as interagency mangrove committees, are one example of specific mechanisms. Memoranda of agreement, consistency requirements,

reassignment of staff, joint hearings or permitting processes, special area management plans and many other types of mechanisms are being used in CM programs throughout the world.

D5. Are there obvious jurisdictional gaps?

Are significant impact-generating activities exempt from regulation or other forms of management?

D6. Are there conflicts with other laws or programs?

Are significant impact-generating activities under the management authority of other agencies? What are they? Which agencies are exercising jurisdiction over these activities? Are the management activities of these agencies consistent with the goals of the coastal management initiative?

D7. Are jurisdictional conflicts acknowledged?

How are such conflicts dealt with? Have interagency arrangements been made or mechanisms established to address jurisdictional conflicts? What are they?

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## E. Staff Competence

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E1. What management and/or technical training and capacity-building activities have been provided to project staff and/or staff from cooperating agencies?

Have the staff become conversant with relevant experience elsewhere in their nation, the region and the world? Is there a specific capacity-building strategy?

*If so, how effective is it?*

*E2. What is the level of staff confidence and commitment to the plan?*

*Do the staff expect to play significant roles in the program's implementation? Staff understanding and commitment is essential to effective implementation. To what extent have staff participated in the design of the plan? Do they believe proposed management strategies will be effective?*

*Do they think the proposed strategy is feasible?*

*E3. Are project or program staff sufficiently competent in the technical and institutional/political issues being addressed?*

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## *F. Planning for Sustained Financing*

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*F1. Have the monetary costs and other resources required to implement the plan been estimated?*

*Have short-term and longer-term personnel costs been budgeted? Research costs? Capital costs? Are there significant uncertainties regarding the costs of project*

*implementation and the cost-effectiveness of project elements?*

*F2. Has a funding strategy for the implementation of the plan been prepared?*

### **Box 10:**

#### *Characteristics of Successful Early Implementation Actions*

- *Are short-term – there should be a product or end point in less than 12 months*
- *Produce tangible results*
- *Involve diverse groups – early actions should test management techniques that require collaboration between different groups or institutions*
- *Model desired behaviors for resource use and management. Groups are provided with hands-on experience with participatory resource management*
- *Provide positive publicity for management initiatives*

*Does the funding strategy combine core funding from government with other sources? What proportion of project costs is a routine part of the government budget? What proportion of costs is supported by donors? What project elements would be sacrificed if the project had to rely solely on government funding?*

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## *G. Early Implementation Actions*

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*G1. What early implementation actions were*

*undertaken?*

*Are project officials trying to implement a permit system? Conduct educational workshops? Form collaborative relationships with other management agencies? Create special plans?*

*G2. To what extent is the experience gained transferable to other issues or sites?*

*Are there significant lessons from these early implementation efforts? What has been learned? Do the lessons apply in other contexts?*

*G3. Has the experience gained been incorporated into policy formulation?*

*Have significant modifications in the management assumptions and the major features of the plan occurred? What adjustments have been made? By whom? What is the rationale for such adaptation? Significant adaptations can be a sign of program 'learning,' but they may also be evidence of acquiescence to political pressure.*

*G4. Do early implementation actions produce tangible improvements for stakeholders in the place where they are applied?*

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## *H. Public Education and Awareness Programs*

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*H1. Has a public education and public involvement program been designed that is tailored to informing and involving those who have an interest in the selected issues?*

*Have the target audiences been identified? Have the key messages to be conveyed been formulated? With what success have they been transmitted?*

### **Box 11:**

#### *Beach Cleanups Are Useful Early Actions*

*Beach cleanups were used as an early action by the Center for Marine Conservation's community-based coastal management project in the Dominican Republic (DR). In the DR, beaches are segregated by socioeconomic status. Staff managing the project recognized that integrated management relied on the coordination of these different groups. A beach cleanup, organized to include beaches used by all economic classes, required the coordination and cooperation sought by the project. The success of the cleanups showed community members the power of coordinated action. Participants decided that this approach could be used to address other issues, and organized a community management committee with broad social class representation.*

*H2. Have public education and involvement efforts had discernible impacts on target audiences?*

*Have the reactions and suggestions from the public influenced the design of the plan?*

*H3. Have project officials sought to educate officials and opinion leaders about coastal problems and project efforts to alleviate them?*

*Do high officials and opinion leaders speak publicly and favorably about CM? Do they understand the implications of the issues the project is addressing, their causes and possible solutions?*

*H4. Has the project changed public perceptions of the issues and contributed to any changes in behavior?*

# STEP THREE

## FORMAL ADOPTION AND FUNDING

### Overview of Step Three

The third step in the CM development cycle is the time when planning efforts crystallize. In some cases, a high level formal mandate for CM policy formulation and planning is required before Step Two can begin. This is typically expressed in legislation, an executive decree, or a Cabinet resolution that creates an interministerial commission, or its equivalent, and charges it with specific responsibilities and powers. Often, a time period is stipulated for the preparation of a plan and guidance is provided on the process by which the plan will be prepared, the issues it must address and geographic areas where it will focus. Such an initial official governmental commitment to CM is most useful when it clearly articulates the nation's policy and provides a reference point for both planning and subsequent decisionmaking. An official mandate to plan and formulate policy may or may not provide the funding required.

Before a CM program can begin a period of full-scale implementation (Step Four), the institutions involved must formally commit to a specific course of action. Here again, adoption may take many forms, but typically requires an executive decree, Cabinet resolution or a high level administrative decision. New government agencies may be created to implement the CM program. Existing agencies often must formally commit to collaborating on the implementation of discrete elements of the program and important roles may be given to non-governmental organizations. This formal-

ization usually advances a first generation CM initiative from the status of a short-term project to a more formal program that is part of the structures or formal policies of government.

There are few essential actions in this step, yet securing the unambiguous implementing authority and resources required for implementation may be a greater challenge than successfully completing the planning phase of the program. The essential actions are:

### Step 3: Formal Adoption and Funding

#### Priority Actions:

- Obtain governmental mandate for a planning and policy formulation process.
- Obtain formal endorsement of policies/plan and the authorities necessary for their implementation.
- Obtain funding required for program implementation.

Formal adoption of a new CM program and of a new approach to important resource management issues affects the distribution of authority and influence among institutions, interest groups and politicians. This may trigger defensive behavior and bureaucratic maneu-

vering that is often mysterious and distasteful to the technical experts and scientists that have played important roles in Steps One and Two. Negotiating new legislation or a formal endorsement by a minister or agency head is a process dominated by bargaining and accommodation as the coastal program finds its place in the existing structures and institutional territories of government. The careful, objective analysis of scientific information often fades into the background.

Many CM initiatives fail in Step Three. They do not survive to earn the necessary endorsements or are so modified by interagency negotiations and the political influence applied by some interest groups that their potential to achieve significant progress on the issues they have been designed to address is reduced or lost. Success lies in understanding the dynamics of Step Three and carefully planning for it during the previous two steps of a CM initiative. One reason for this is that many CM initiatives funded by international donors in developing nations are conceived and financed as planning efforts that will somehow 'transfer' responsibility and financial obligations to local or national government agencies once the plan is complete. Experience teaches that such transfers occur when the implementing institutions have played a significant role in shaping the program and feel ownership for it.

Step Three involves mobilizing stakeholder and political support for the program. This mobilization process should begin during the issue identification phase and continue through the planning phase. Technical excellence can help in creating credibility for the proposed management program, but the active support of key officials and stakeholders is likely to be more important when seeking formal endorsement of the program.

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## Questions

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### A. Formal Approval of the Plan

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A1. Has the approval process cleared the way for a period of implementation or is further planning and/ or the preparation of operational procedures and regulations required?

In some cases, the formal approval process occurs in two steps whereby new legislation or the creation of a new governmental institution is the result of an initial cycle of planning. This was the case, for example, in Sri Lanka and Ecuador where the formal enactment of a CM program was the culmination of an initial period of planning. This was followed by the preparation of detailed management plans, which, several years later, required a second round of formal approvals. In other cases — for example, many state coastal zone management programs in the USA — a one-step approval process provided formal enactment of both the institutional structure and the plan itself.

A2. By what process, and at what political level, was the coastal management program officially approved?

Has the program been formally adopted? By an executive agency? Legislative body? At what level of government? What form does adoption take? What status does this form of adoption have? Is it consistent with other natural resource management programs? Is the level of adoption sufficient to ensure that executive agencies will engage in appropriate implementing activities?

*A3. What were the major issues raised during the approval process?*

*What governmental agencies, political figures, groups or interests were most involved during the approval process? Formal approval is primarily a political process during which the technical issues that dominated during Step Two recede into the background. Sometimes the program must respond to unforeseen 'windows of opportunity' such as a hurricane, flood or epidemic, and program approval is gained as a response to a crisis. In other situations, an opportunity was foreseen by the program and formal approval was designed, for example, to coincide with the period directly preceding or immediately following a national election. Did the strategies for Step Three, as they were contemplated in Steps One and Two, play out as expected? Did new stakeholders appear or unexpected issues materialize? How well were such unexpected events dealt with by the project team?*

*A4. What is the management strategy as it was formally approved in the law, decree or interagency agreement?*

*Was the 'logic' or 'theory' upon which the design of the management plan was based in Step Two significantly modified during the approval process?*

*If significant modifications were made to the plan and the institutional framework by which it will be implemented, how are these modifications likely to affect the prospects for successful implementation?*

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## *B. Enactment of the Institutional Framework for Implementing Coastal Management Policies*

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*B1. Has the transition been made successfully from a project or collection of projects to a permanent coastal management program with an institutional identity as a permanent element within the structures of government?*

*Are agencies responsible for implementation primarily national, primarily local or regional, or some combination?*

*B2. Have the necessary inter-institutional agreements been negotiated that specify how responsibilities for implementation are allocated among different pre-existing institutions?*

*Since CM, by definition, addresses more than one sector, the implementation of a management program frequently requires the coordinated action of several governmental institutions. Before implementation can proceed, it is often necessary to negotiate memoranda of understanding or similar formalized agreements that specify budget allocations, commitments in staff, logistical support and the procedures by which the governance process will proceed.*

*B3. Is the legal authority and implementing framework considered adequate for implementing the plan?*

*Is the coastal agency authorized to expend funds? To engage in regulatory activities? To hold other agencies accountable for CM activities?*

*B4. Have new conflicts with other laws or programs surfaced during the process of program formalization?*

*How significant are such conflicts? Will other agencies exercise 'vetoes' over any aspect of the program as it is implemented?*

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### *C. Funding for Program Implementation*

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*C1. Have adequate financial resources been committed for full implementation?*

*What proportion of implementation costs are a routine part of the government budget? What proportion of costs are supported by short-term grants and projects supported by international institutions and other institutions?*

*A variety of mechanisms can provide a program with a long-term infusion of core funds that may be raised from user fees, dedicated tax revenues and commitments of long-term financial contributions from central government. Other sources of funding may support specific activities or research and further planning on specific issues or special areas.*

#### **Box 12:**

##### *Inter-American Development Bank (IDB) Coastal Management Loans*

*Since 1993, the IDB has approved almost US\$ 60 million in financing for integrated coastal management, and in 1996 had an additional US\$ 90 million in pending coastal management operations.*

*The Bank's first integrated coastal management loan was for Ecuador in 1993. This investment recognized the links between coastal ecosystems, water quality and the sustainability of that country's shrimp mariculture industry. Several lessons emerged during the preparation of the program including: (a) the importance of having coastal stakeholders genuinely participate in setting priorities and forging the decisionmaking arrangements for project execution; and (b) the value of donor coordination.*

*Most of the Bank's experience in integrated coastal management to date has been in the preparation of loans. These programs will face various obstacles during implementation, including limited, adequately trained human resources in both government and the private sector. In each case, the small coastal units that do exist face formidable tasks in resolving conflicts among economic activities and in securing the support of more powerful sectoral agencies such as fisheries, tourism and public works departments. A key to success will be the ability to demonstrate that good coastal management yields measurable returns to the national economy in terms such as improved competitiveness (for tourism or shrimp production for example), increased employment and/or reduced public costs (e.g., for coastal flood control).*

*Source: Inter-American Development Bank, Sustainable Development Department, December, 1997.*



# STEP FOUR

## IMPLEMENTATION

### Overview of Step Four

**4** *Implementation is the time when the policies and actions selected and designed in Steps One and Two and formally approved and funded in Step Three are made fully operational. This is when all the investments in research, planning, educating, mediating among diverse interests and campaigning for formal approval are harvested. Listed in step 4 are the major categories of activities that typically occur during implementation.*

### Step 4: Implementation

#### Priority Actions:

- Modify the strategies of the program as needed.
- Promote compliance with program policies.
- Strengthen institutional frameworks and legal authority for management.
- Implement mechanisms for interagency coordination.
- Strengthen program staff's technical and administrative capacity.
- Catalyze the construction and maintenance of necessary physical infrastructure.
- Sustain participation of major stakeholder groups.
- Implement conflict resolution procedures.
- Maintain the program's priority on the public agenda.
- Monitor performance and societal/ecosystem trends.

*In practice, implementation is complex and the list of potential implementation problems is enormous. Those who have studied the science of implementation theory as it applies to CM have attempted to identify critical preconditions for implementation success (Hennessey, 1994; Lowry, 1985; Imperial, Robadue, and Hennessey, 1992; and Sabatier and Mazmanian, 1979, 1981). Sabatier and Mazmanian (1979, 1981) identify six critical preconditions for successful implementation:*

- *Clear and consistent policy objectives*
- *Good policy-relevant science*
- *Sufficient jurisdiction and authority*
- *Good implementation structure*
- *Competent and committed staff*
- *A priority position on the public agenda*

*These preconditions for implementation success are incorporated into the questions below. They are consistent with the attributes of effective CM presented earlier on page 7.*

*When CM programs rely primarily on regulations to implement their policies, they risk becoming bureaucratic and rigid during Step Four. To counteract this tendency, it is essential that the identification and analysis of issues continue during Step Four, and that the program be alert to new problems and new opportunities and that it maintain the ability to respond to them. The program's constituencies must be sustained. They too will change as new issues emerge and the ones selected at the beginning of the program mature and become more or less salient.*

## Questions

### A. Effectiveness of the Management Strategy

*Coastal programs typically fail either because the program 'logic' (assumptions, hypotheses) is flawed or because implementation activities were poorly executed. One of the major tasks of evaluation is to assess both the soundness of program hypotheses and the quality of implementation activities.*

#### Box 13:

##### *Global Environmental Facility (GEF) Recommendation: "Learn From Experience"*

*The GEF Secretariat prepared a study of pilot project lessons learned for the first Assembly of the Global Environment Facility in New Delhi (April 1-3, 1998). The document finds that:*

*"...even well-designed projects evolve continuously, and their managers need to be able to deal with a variety of technical, social and political issues at the same time. Successful projects and their staff consistently learn and benefit from their own experience, and that of others. They pay careful attention to feedback from project staff and participants, and make modifications and improvements promptly in response. In addition, they regularly look beyond their own four walls for ideas and solutions. Although it is sometimes difficult to get this information – and almost always difficult to find time to read and digest it – the most effective project managers make this a priority."*

*Source: Global Environment Facility, Monitoring and Evaluation Program, January 1998.*

A1. Is the 'logic' or 'theory' upon which the management strategy is based proving to be valid?

Have the fundamental hypotheses upon which the strategy is based been made sufficiently explicit to permit the analysis of their validity?

Refer to Step Two, question C1.

A2. How, if at all, has the strategy been modified over time?

Have significant modifications in the management strategy occurred? What adjustments have been made? By whom? What is the rationale for program adaptation? Significant adaptations can be a sign of program 'learning,' but they may also be evidence of acquiescence to political pressure.

A3. Do implementation activities balance between regulatory and non-regulatory actions?

Refer to Step Two, question C4.

A4. What groups or individuals are most directly impacted by the implementation of the program?

Are such impacts the ones that were expected when the program was designed and approved? If not, why?

Refer to Step Two, question C2.

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## B. Compliance and Enforcement

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B1. Are the changes in target group behavior sought by the management program being achieved?

What specifically are those changes, if any? In Sri Lanka,

one of the strategies intended to reduce coastal erosion at particular sites was a ban on offshore coral mining at selected sites. At most sites at which mining was occurring, a combination of a legal prohibition, education activities and police enforcement was sufficient to greatly reduce or stop this activity. However, at a few sites, the initial ban was insufficient because such mining was so lucrative, livelihood conditions were so poor and local police were unwilling to enforce the ban. Changing the strategy to focus on coral kilns

rather than miners – combined with efforts to create economic alternatives for miners – has proved more successful.

Refer to Step Two, question C3.

B2. Has the program contributed to important examples of self-enforcement practiced by user groups?

### Box 14:

#### World Bank Guidelines on Integrated Coastal Zone Management

"Enforcement of existing rules and regulations is one of the most difficult aspects of government in developed and developing countries alike. The goal should be to have rules that are generally accepted by most parts of society and that can be enforced. Chances for this are dependent on the knowledge level of the public and the credibility of government programs. Strong and objective enforcement is often required, however, when parties are clearly benefiting economically from breaking the rules."

Source: World Bank, 1996.

Because most jurisdictions lack the personnel and funds to engage in extensive surveillance of coastal users, management activities that encourage individual or collective self-management through cooperative user groups or other institutions can be critically important. In Sri Lanka, for example, a fishing cooperative has developed self-governing rules regarding fishing practices, which the members of the cooperative enforce.

B3. Are the inducements offered to or the costs imposed on target groups in the management strategy proving to be effective?

For example, do density bonuses offered to coastal hotel developers in exchange for increased setbacks or open space work as intended? Are pollution discharge fines resulting in new waste processing procedures on the part of coastal industries?

Refer to Step Two, question C5.

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### C. Adequacy of the Institutional Framework and Legal Authority for Management

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C1. Is the legal authority for management proving to be adequate?

What modifications to the legal framework have been made? Why were they made? Did they strengthen or weaken the program?

Refer to Step Two, question D3.

C2. Is implementation revealing obvious jurisdictional gaps?

Are significant impact-generating activities exempt from regulation or other forms of management? Are other governmental agencies continuing to carry out their

#### Box 15:

*The Organization for Economic Cooperation and Development (OECD) Council's Recommendation on Integrated Coastal Zone Management*

In 1992, the OECD Council recommended that member countries achieve the goals of integrated coastal management through, inter alia: "strengthening the integration and harmonization of sectoral policies affecting coastal zone management and resource usage."

Source: Organization for Economic Cooperation and Development (OECD), Paris, 1993.

programs without reference to the coastal program?

For example, an irrigation department may build irrigation systems that increase the discharge of fresh water in coastal areas where corals are located. Or a fisheries department may accept funds for the construction of small fisheries harbors without adequate consideration of the impacts of such a facility on coastal erosion.

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### D. Interagency Integration and Cooperation

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'Policy integration' is a fundamental element of CM. It involves breaking down sectoral barriers by getting agencies to recognize their impact on other sectors,

communities and the environment. Increased coordination among government agencies and with outside organizations involves a combination of amending mandates to CM objectives and offering incentives to influence institutional behavior.

D1. Are there conflicts emerging with other programs or laws?

Are the activities of other agencies consistent with the goals of the CM program?

D2. Are jurisdictional conflicts acknowledged?

How are such conflicts handled? Have interagency arrangements been made or mechanisms established to address jurisdictional conflicts? What are they? How well do they work?

D3. Are the forms of interagency cooperation required by the management strategy working?

What organizational arrangements for interagency coordination or cooperation are proving effective? Which are less useful? In some coastal programs, management authority is divided or allocated among several agencies. Research on coastal resources, for example, may be the responsibility of an agency other than the one charged with regulatory authority.

Task forces, coordinating committees, interagency work groups and memoranda of agreement are typical mechanisms for encouraging coordination. Sometimes much simpler techniques can be effective. For example, in the early days of Sri Lanka's CM program, coastal hotel developers were either not aware of or ignored coastal permit requirements. To increase compliance, the Coast Conservation Department developed a

strategic alliance with the Ceylon Tourist Bureau (CTB). Because the CTB issued liquor licenses, its approval was essential to anyone hoping to operate a successful hotel. CCD was able to persuade CTB not to issue a liquor license to any hotel applicant that had not applied to CCD for a coastal permit. Compliance with the CCD's coastal permit increased substantially.

D4. Are other agencies exercising 'vetoes' over any aspects of the coastal management strategy?

Comprehensive CM plans or projects usually require the cooperation of multiple governmental and non-governmental agencies and organizations. In general, the greater the number of clearance points, the greater the possibility of implementation 'blockages' or problems. As Mazmanian and Sabatier note:

"Even given agreement among all actors on basic objectives, the multiplicity of clearance points offers numerous occasions for delay and the breakdown of consensus as participants negotiate specific agreements. In the absence of such goal consensus, there is every likelihood that opponents or lukewarm supporters of program objectives will be able to control sufficient clearance points or demand important concessions and potentially to scuttle the program as it applies to them. This is particularly likely in intergovernmental programs, where there will normally be substantial variation in the attitudes of implementing officials in various jurisdictions." (Mazmanian and Sabatier, 1983)

For example, an urban housing authority may seek to overrule a CM policy designed to discourage filling of wetlands, because such wetland sites are considered prime, inexpensive locations to construct low-cost housing. Likewise, a regional development authority trying to encourage industrial parks at a few key sites may seek to block mangrove protection programs.

*D5. What inducements are encouraging interagency coordination?*

*Have incentives been developed to encourage interagency cooperation or coordination? Are additional funds, staff or other resources made available?*

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### *E. Program Staffing and Administration*

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*E1. Are there sufficient personnel and resources to implement the management strategy?*

*Analysis of staff workload and workflow can help determine whether the program has sufficient staff. In addition, staff support, in the form of vehicles to visit coastal sites, cartographers and other specialists, funds for technical analysis and travel are all part of necessary resources to support a program.*

*E2. Is the performance of employees effectively monitored and managed?*

*Are employees recognized and evaluated based on their accomplishments and ability to meet their job requirements and objectives? Are there job descriptions for every position in the institution? Do employees participate in setting annual performance objectives? Is there an annual employee performance appraisal procedure? Is employee professional development and training encouraged?*

*E3. Are human resource and administration guidelines clear?*

*Is there a personnel policies and procedures manual, with outlines for grievances, sickness and compensa-*

*tion? Do new staff members receive orientation materials with policies, procedures, mission and values? Do managers conduct staff meetings on a regular basis? Are there guidelines for contracting consultants?*

*E4. Do staff responsible for implementation of the management strategy understand it? Were they involved in its design?*

*Staff understanding of the overall program goals and implementation strategy is important not only to insure that implementation occurs as designed, but because it is also politically important. Staff understanding is a necessary condition for staff acceptance and support. Staff understanding is likely to be greater if they have participated in the planning process.*

*E5. How committed and skillful are the staff in implementing the management strategy?*

*Staff support as well as commitment and skill are obvious ingredients of a successful implementation effort. To the extent that implementation involves the exercise of administrative discretion, as is the case in a regulatory program, it is particularly important that staff have both the requisite technical skills to make judgments and the political skills to deal with the inevitable conflicts that arise in a regulatory program.*

*E6. What changes in the management strategy have been initiated by staff?*

*Have staff modified the management program? If so, why? Modifications may involve something as simple as revising information requirements for permits or changing the program in some more fundamental ways, such as modifying setback requirements or exempting some uses or activities from the regulatory program.*

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## *F. Financial Management*

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*F1. Are budget processes and financial management adequate?*

*Are there established budget processes, financial controls and tracking mechanisms in place? Are there clear office procedures for handling payables and receivables? Are there regular financial reports? Do program leaders have a clear understanding of the program's financial health? What type of accounting system is in place? Is the financial system computerized?*

*F2. How is financial accountability insured?*

*Who is responsible for insuring financial accountability? Do advisory groups or non-governmental organizations review budgets or program funding?*

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## *G. Technical Analysis*

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*G1. What technical judgments does the management strategy require?*

*Are there routine technical judgments that are required by management? What are they? The design of a special area management plan, the review of a permit application and other management activities may require some technical analysis. Are special studies or analysis required on an episodic basis? Do staff review environmental impact assessments, for example?*

*G2. What specific technical data are gathered for management purposes?*

*What technical data are routinely required? How are they generated? Do they come primarily from permit applications? What is done to insure the validity of data submitted by permit applicants?*

*G3. Are technical resources adequate for management?*

*Do staff have the requisite technical skills to make appropriate judgments? Does analysis require any special equipment? Is supporting equipment adequate? How accessible are requisite technical resources? Do staff have the capacity to assess technical data? For example, staff might need to decide whether proposed seasonal fishing quotas will be sufficient to maintain stock at sustainable levels or whether waste discharge from an aquaculture pond will violate water quality standards.*

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## *H. Transparency*

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*H1. Are the policies, decisionmaking procedures and enforcement mechanisms of the program understood by those most directly affected by its implementation?*

*H2. Are impending program decisions announced and made known to those likely to be affected?*

*H3. To what extent are program data (e.g. impact assessments, permit decisions, development and conservation plans, and violations) available to stakeholders and the public?*

Are there notification requirements for hearings or meetings on permits, variance applications or other management activities?

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## I. Construction and Maintenance of Infrastructure

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11. If construction of infrastructure is part of the portfolio of the coastal management agency, is the implementation of this element of the strategy over-taxing the staff or diverting attention from other management activities?

This question is designed to elicit information about the coastal agency's role, if any, in coastal infrastructure development.

12. To the extent that infrastructure development is part of the agency portfolio, how is the need for specific projects established?

Are infrastructure projects developed on a case-by-case basis? Are they identified in a plan? What technical analysis is done to justify projects? How sound is the technical analysis?

13. To what extent do identifiable beneficiaries participate in the design, funding, construction and maintenance of coastal infrastructure projects?

Do beneficiaries participate in the design of projects? If so, how? Do they participate in the funding? How was the amount of financial participation in the project established? Do they participate in monitoring project

construction? How transparent are project accounting procedures?

Do beneficiaries have a role in operation and maintenance? What is the role of beneficiary groups? How was it established? Is there a user group with its own rules?

14. Are there cost recovery mechanisms for the construction and maintenance of infrastructure?

Do users help pay for infrastructure? How? Through fees? Special assessments? Other mechanisms?

15. What is the quality of coastal infrastructure?

To what extent is the coastal infrastructure effectively maintained? What is the role of the coastal agency in infrastructure operation and maintenance? Does it appear to be effective?

### Box 16:

*The Inter-American Development Bank's (IDB) Coastal Management Strategy*

*Participation is one of the essential guiding principles of the coastal and marine resource management strategy of the Inter-American Development Bank.*

*"Coastal management programs must ensure strong public involvement of those who are most affected by the coastal development process. International experience repeatedly demonstrates that programs are successful and sustained only where there are constituencies that are active advocates for improved resource management.... The responsibility towards participation goes well beyond awareness and extends to creating genuine accountability among all stakeholders."*

*Source: Inter-American Development Bank, Sustainable Development Department, December 1997.*



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## *J. Participation*

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*J1. What governmental and non-governmental groups and individuals have the biggest 'stake' in management?*

*What is the degree of political support for management among these groups? The degree and type of public participation in management is likely to depend on the nature of the management effort (e.g., permit system, development of a special area management plan, etc.), time and personnel available to manage a participation program and attitudes about the value of public participation. The larger issue is whether public understanding and support for the program exists and, to the extent that these elements are lacking, what can be done to foster such understanding and support. In some countries, a participation effort may be minimal, involving only public education efforts. Participation can be more intensive, for example, by promoting a structured negotiation process among disputants in coastal areas.*

*J2. To what extent are program beneficiaries and major stakeholder groups actively involved in program implementation?*

*It is useful to identify groups involved in the management program and their specific issues. Hotel owners, fisherfolk and environmental activists are among those likely to be found in advocacy roles.*

*J3. What techniques or strategies have been used to encourage participation?*

*Are participatory strategies proving to be successful? Some participation programs are organized simply to encourage public awareness, understanding and support through films, workshops and other programs. Others actually seek information from user groups about the quality and use of coastal resources through workshops and surveys. A few programs seek to create 'participation' in the form of self-management by resource user groups.*

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## *K. Conflict Resolution*

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*K1. What conflicts, if any, have arisen in the course of implementation?*

*Are there conflicts over coastal uses? Policy conflicts among coastal users agencies? Jurisdictional conflicts? Conflicts between applicants and the agency? The main types of conflicts should be identified.*

*K2. What conflict resolution techniques have been used?*

*How successful are they? Are conflicts acknowledged? How are they handled? Are conflict-resolution meetings held? Are senior officials asked to arbitrate or mediate? Are facilitated conflict resolution workshops organized? What are the conflict management strategies and techniques?*

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## L. Political Support

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L1. Do senior political figures support the program?

Are Cabinet ministers and legislators familiar with the program? Is there general support for the program? Are there aspects of the program that are opposed or that have been particularly controversial? Do senior political figures have confidence in the program leadership and staff?

L2. Are there elected or other government officials who are in a position to veto or alter aspects of the management program?

Have any program decisions been overruled? Has funding been threatened or reduced? Is the support of important officials changing over time? Why?

L3. What are the primary implementation problems as seen by officials involved in management?

Interviews with public officials and non-governmental groups can reveal the specific causes of implementation

problems and the actions or changes in attitudes needed to overcome them.

L4. How supportive are non-governmental groups?

Are non-governmental groups, such as environmental NGOs, user groups and business groups, supportive of the program? Which groups support the program? How is the support manifested?

L5. Is there general public support for the program?

How is such support expressed? Is there evidence of general public support for the program? Newspaper editorials, positive letters to the editor, 'coastal days,' school programs, etc., can be thought of as evidence of general public awareness and support.

### Box 17:

#### Local and National Ownership of the Process

Since a coastal management program articulates a nation's goals and policies for a geographically specific region or regions, it is essential that the process by which it is developed and refined is 'owned' by the government and the constituency it represents. Key parameters of ownership are:

- Government endorsement and involvement in the process
- Broad stakeholder participation fortified through public dialogue
- Sustained, ideally collaborative, support from NGOs and the donor community

A comprehensive assessment of integrated coastal management initiatives in the Mediterranean (1988-1996) identifies these features as critical determinants of sustainability. The most important determinant of sustainability was found to be strong political commitment at all levels in project or program preparation and implementation.

Source: World Bank, 1997

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## M. Program Monitoring

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Monitoring programs should focus on both administrative activities and trends in coastal

conditions. Gathering data on the impacts of the coastal program on the ecosystem qualities and societal groups of concern to the program is especially important.

A monitoring program can be the foundation for adaptation and learning. It provides the information needed to document program milestones, detect potential implementation problems and identify changes in coastal conditions. Assessing the quality of the design of a monitoring program usually involves:

- Identifying what information about program milestones, program activities or coastal conditions is needed
- Determining who inside or outside the agency will generate monitoring information and how it will be used
- Assessing the effectiveness of procedures for collecting, storing, retrieving and analyzing monitoring data

M1. Has a monitoring program been formulated?

Does the program emphasize administrative data, environmental data, social data or a combination? Some programs focus on the collection of administrative data only (e.g., number of permits issued, types of uses for which permits are sought). Most administrative monitoring programs focus on measures of input or effort (number of permits, meetings, workshops, etc.). Other programs also collect information about indicators of coastal ecology

(e.g., water quality, erosion rates) and social sectors of concern to the program (e.g., earnings of artisanal fisherfolk, tourist arrivals, shrimp farm production).

M2. What resources and staff time does the monitoring program require?

Is monitoring placing an unreasonable demand on staff's time?

M3. Is there a sufficiently rigorous analytical design that will make it feasible to draw the types of conclusions desired from the data being collected?

Have control sites been included in the analytical design?

M4. What indicators are used to assess program milestones?

What are the specific program indicators that are used? Are the indicators used generally consistent with international practice? Do they measure

what they purport to measure (i.e., how valid are they)?

#### Box 18:

##### *Program Monitoring: Tanga, Tanzania*

The monitoring program of the Tanga Coastal Zone Conservation and Development Program is designed to support an experimental and learning-based approach to coastal management. The system encourages cooperation, collaboration and shared learning. Three monitoring systems involve the key players:

- Progress of village action plans – focuses on villagers and district officers
- Village participatory processes – focuses on villagers
- Activities of government extension workers – focuses on district officers

These all tie back to the program's overall objectives, that is, do these actions actually help to resolve the priority resource management issues?

Source: Sida/The World Bank, 1996.

*M5. How frequently are indicators of ecosystem quality collected?*

*Some programs collect environmental data only for a specific site, such as a threatened bay. Others try to collect data on a sub-national or national scale. One of the difficult trade-offs that programs face is whether to have comprehensive data for a few sites or a limited amount of data at a sub-national or national scale. Frequency of collection is also important for some indicators, particularly if program managers are trying to construct valid time series for particular indicators.*

*M6. Is the monitoring data gender-disaggregated?*

*Gender-disaggregated data is important to detect and evaluate the effects of the project on women and men separately.*

*M7. Who collects monitoring data?*

*To what extent does the program manage the monitoring program? In some countries, monitoring is separate from program management (frequently in a research agency) and program officials may have little effective influence over what sorts of data are collected, at what sites and with what frequencies. This can limit the usefulness of the data collected when refining management strategies.*

*Citizen monitoring programs are proving cost effective and useful in some settings. Are these techniques being used? How beneficial are they?*

*M7. What administrative decisions, plans or other management activities does the monitoring program inform?*

*One indicator of the relative importance of the monitoring program is the degree to which data generated is actually used in management activities.*

*M8. How is monitoring data collected, stored and made available for retrieval?*

*Are there established protocols for collection, storage and retrieval? Are data collected and stored on a timely basis? Is access broadly available? Are program staff able to access monitoring data easily?*

# STEP FIVE

## ADJUSTMENT AND EVALUATION

### Overview of Step Five

*As described in the initial sections of the manual, CM is an adaptive and iterative process. Successful programs learn from their experience and adapt to changing conditions. This learning process ideally occurs through both internal processes of analysis, reflection and adjustment and by more formalized external evaluations typically conducted by individuals with no former involvement in the program. This manual is designed primarily to promote self-assessment but it can also be used to help frame external evaluations.*

### Step 5: Evaluation

#### Priority Actions:

- Assess the program's impacts on the management issues being addressed.
- Adapt the program to its own experience and to changing social and environmental conditions.
- Conduct external evaluations at major junctures in the program's evolution.

*There are dozens of different approaches to self-assessment, adjustment and evaluation. These approaches vary greatly in their purposes, substantive focus, mix of research methods, analytical rigor and the validity and persuasiveness of the conclusions they offer. When examining a project or program it is useful to examine the types of evaluative studies that have already been conducted, their purposes and methods. The major types of evaluation may be grouped as follows (Olsen, et al. 1997a):*

- *Performance Evaluations are designed to assess the quality of the execution of a project or program and the degree to which they meet the commitments that they make to their funders. Here the issues are accountability and quality control.*
- *Management Capacity Assessments are designed to determine the adequacy of management structures and governance processes as these apply to generally accepted standards and experience.*
- *Outcome Evaluation assesses the impacts of a program upon coastal resources and the associated human society(s).*

## Questions

### A. The Impacts of Self-Assessment and Program Adjustment

A1. Have the design and execution of program activities been periodically assessed?

Are program staff, funders, government officials and/or private sector stakeholders involved in such assessments? How are such assessments structured?

A2. How has the program been modified over time?

Refer to Step Four, question A2

A3. What are the mechanisms by which those most affected by the program can express their views and influence the program's priorities and mode of operation?

A4. How receptive is the funding agency to making adjustments to the design, budget allocations and administrative procedures of the program?

### B. The Purposes and Impacts of External Evaluation

B1. Was external evaluation built into the project or program as a discrete element of its design?

How often are external evaluations conducted? Are they generated inside or outside the agency? Have they been directed at the program as a whole or at discrete projects or components? What is the history of evaluation in the program?

B2. What were the purposes of evaluations?

Was the emphasis on evaluating performance, management capacity, outcomes or a combination of the three? Who performed the evaluations? What was their expertise and what experience did they bring to the program? What was the substantive focus? What evaluative questions were addressed? What indicators of success, effectiveness, capacity or other criteria were used? What data gathering strategies were used?

#### Box 19:

##### Typical Themes for Performance Evaluation

- Is the program designed around an explicit and appropriate conceptual framework?
- Is the project being implemented as designed? What departures from planned management strategies have occurred and why?
- Are funds spent according to work plans and by the approved procedures?
- Are the program budget, personnel and administrative procedures appropriate to the objectives?
- Does the program address relevant social and environmental issues?
- Are the program's objectives and intended results realistic and relevant? To what degree have these objectives been achieved?
- Do program impacts appear reasonable for the amount of money and effort expended?
- Is the program implemented efficiently?
- Is the program likely to create the impacts envisaged?

Source: Olsen, et al. 1997a.

*B3. How were the evaluation results communicated?*

*Were the results of the study disseminated internally and outside the program? Was a report circulated? How broadly?*

*B4. How were the results of the evaluation used?*

*How, if at all, has the evaluation shaped how agency staff conceive of their management approach? Were any program adjustments made? Are there other ways in which the study results have been used?*

*B5. How, if at all, has evaluation contributed to organizational learning?*

*Did program officials find the evaluation process useful? Is there evidence that there are changes in perspectives or behavior as a result of evaluation? Are they interested in participating in future evaluations?*

# COASTAL MANAGEMENT OUTCOMES CHECKLIST

*This checklist refers back to Figure 2 and the sequence of coastal management outcomes.*

*References to the outcomes in the self-assessment questions are noted.*

## *First Order Outcomes* ✓

*The appropriate non-governmental groups and governmental authorities have formally approved the coastal management plan (Step Three, questions A1-A3).*

*The authorities and institutional arrangements required to implement the plan have been negotiated and formalized as a permanent feature of the governance system (Step Three, questions B1-B5).*

*Funds and other resources required for implementation have been secured (Step Three,*

## *Second Order Outcome.* ✓

*Early implementation actions provide tangible improvements for stakeholders in the place where they are applied (Step Two, question G4).*

*Changes in target group behavior are detected (Step Four, question B1).*

*Examples of self-enforcement are practiced by user groups (Step Four, question B2).*

*Interagency conflicts are reduced or resolved (Step Four, questions D1-D4).*

*Perception and attitude changes among stakeholders are detected (Step Two, questions H1-H4).*

*Use conflicts are reduced or resolved (Step Four, questions K1-K2).*

*Infrastructure has been constructed/improved (Step Four, questions I1-17).*

## *Third Order Outcomes* ✓

*Socioeconomic benefits for specific target groups are evident and can be linked to the program's efforts.*

*Specified indicators of environmental quality are effectively safeguarded and/or have l*

## *Fourth Order Outcomes* ✓

*Sustainable forms of coastal development are evident and well protected.*



## GLOSSARY

*Adaptive Management:* An approach to management based upon learning from experience. Management initiatives are conceived as experiments and test stated hypotheses. According to Lee (1993), adaptive management is built upon the two pillars of (1) a sound governance process and (2) reliable information.

*Coastal Management:* Three types of coastal management (CM) are:

*Enhanced Sectoral Management (ESM):* Focuses on a single sector or topic but explicitly accounts for impacts and interdependencies with other sectors and with ecosystem processes.

*Coastal Zone Management (CZM):* Multi-sectoral planning and regulation focus upon the characteristics and needs of narrow, geographically delineated stretches of coastline.

*Integrated Coastal Management (ICM):* Expands the cross-sectoral feature of CZM to include consideration of the closely coupled ecosystem processes within coastal watersheds and oceans.

*Coastal Management (CM) Cycle:* The process by which CM programs evolve. The CM development cycle places the many actions of a program or project in a logical sequence and helps unravel the complex inter-relationships among the many elements of CM. The process begins (Step One) by identifying and analyzing the issues in the stretch of coast in question and then proceeds to set objectives and prepare a plan of policies and actions (Step Two). Next comes Step Three of formalization through a law, decree or interagency

agreement and the securing of funds for implementation of some selected set of actions. Policy implementation (Step Four) is the step in which procedures and actions planned in the policy formulation stage are made operational. Step Five is evaluation.

*Coastal Management Plan:* A document that analyzes the management issues to be addressed, defines the objectives for a management effort and the strategies by which such objectives will be achieved. A plan proposes an institutional framework and then assigns responsibility for the actions that will be taken.

*Coastal Management Program:* A resource management effort typically encompasses the coastal region of a province, state or nation. A CM program's goals and objectives are sustained over many decades. It has institutional identity as an independent organization or formalized network of institutions with an executive or legislative mandate; it acts within a geographic area with defined seaward and landward boundaries and addresses at least two sectors (adopted from Sorensen and McCreary, 1988).

*Coastal Management Project:* A specific management effort with short-term targeted objectives. Projects typically span three to six years. A number of projects contribute to a sustained CM program.

*Goals:* A general statement of the desired outcome or impact of the CM project. Goals are broad and long-term.

*Generation of Coastal Management:* A completion of the five steps in the CM cycle is a 'generation' of a program. Progress towards the goals of CM is achieved through a linked sequence of generations.

*Governance: Addresses the policies, laws and institutions by which a set of issues of concern to a society are addressed. Governance questions the fundamental goals, and the institutional processes and structures that are the basis of planning and decisionmaking. Governance sets the stage within which management occurs.*

*Institutional Arrangements: Include the composite of laws, customs and organizations and management strategies established by society to allocate scarce resources and negotiate among competing values for a social purpose, such as to manage a nation's coastal resources and environments.*

*Instrumental Learning: The process by which experience is analyzed to identify the strengths and weaknesses of a program and adjustments are made to how it is being implemented. For example, one management tool may be replaced with another.*

*Management: The process by which human and material resources are organized to achieve a known goal within a known institutional structure. Thus, management typically refers to overseeing the work of a unit of a company or a governmental agency.*

*Management Capacity Assessment: Is conducted to determine the adequacy of management structures and governance processes as these relate to generally accepted international standards and experience. The purposes are to find ways to improve program and project design and implementation, and to make adjustments to the internal workings of a project or program, and to the CM strategies and practices that the project or program is promoting.*

*Management Issue: A problem with the resource area or an opportunity for management. It is not a topic or a situation. For example, 'decline of estuarine-dependent fisheries' is a problem that makes a good management issue. 'Ecotourism as a source of alternative livelihoods' is an opportunity that makes a good management issue. 'Fisheries' or 'ecotourism' are topics, but are not clearly defined enough to be management issues.*

*Objective: Specific statement of the desired accomplishments or outcomes of a project. Project objectives should be measurable, time-bounded, clearly stated, practical and impact-oriented. A achievement of a sequence of a project's or program's objectives lead to the fulfillment of its goals.*

*Outcome Assessment: Evaluates the impacts of a CM initiative upon coastal resources and/or the associated human society(s).*

*Participatory Management: The process through which the public and stakeholders are informed, contribute to and assume responsibility for management initiatives.*

*Performance Evaluation: Addresses the quality of project execution and the degree to which project goals are achieved. Issues of accountability to the funder and of quality control are priority concerns.*

*Pilot Project: A demonstration project to build interest in and capacity for future management efforts at a larger scale.*

*Stakeholder: Those that are affected by the outcomes of a coastal management initiative – negatively and positively – or those that can affect the outcome of an initiative (World Bank, 1996). Typical stakeholders include those that fund a program, coastal residents, users of the coastal resources, government agencies (national, state and local) and those who, although physically distant from the place in question are concerned with its condition (e.g., international interest groups).*

*Important – and too often forgotten – stakeholders are future generations.*

*Strategy: The means selected to achieve one or more objectives. A project's objectives define 'what;' the strategies define 'how.'*

*Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Our Common Future, 1987; Brundtland Commission). Sustainable development includes two key concepts:*

- *The concept of 'needs,' in particular the essential needs of the world's poor, to which overriding priority should be given; and*
- *The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.*

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