Chapter 7

Conserving Critical Coastal Ecosystems in Mexico:

Capacity Building and Strategic Innovation for the Sustainable Development of Coastal Communities and Regions

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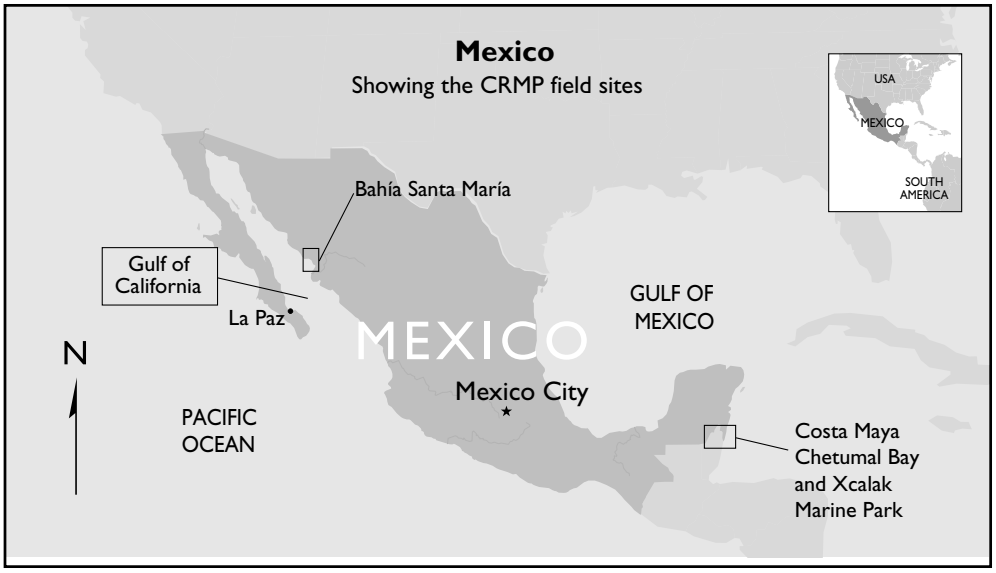
Introduction

The seven-year (1996 – 2003) program Conserving Critical Coastal Ecosystems in Mexico (C^3EM) was the third country program undertaken during CRMP II. It evolved within a context of rapid development in Mexico's coastal growth centers, a strong response to this development from Mexican and international conservation communities, and important efforts in the 1990s to upgrade Mexico's institutional framework for environmental management. During this period, the U.S. Agency for International Development (USAID) and the conservation community in Mexico focused primarily on conserving biodiversity and implementing management plans for formally established protected areas.



C^{3}EM has been implemented by the Coastal Resources Center (CRC) at the University of Rhode Island (URI) through a partnership with two Mexican non-governmental organizations (NGOs)—Amigos de Sian Ka'an (ASK) and Conservation International/Mexico (CIMEX)—and a Mexican state university, the University of Quintana Roo (UQROO). The C^{3}EM program operates in two coastal regions—the southern portion of the state of Quintana Roo on the east coast and the Gulf of California. In both regions, the project's partner organizations lead local conservation and management efforts.

The opportunity for CRC to work on integrated coastal management (ICM) in Mexico emerged in 1995. It began when CRC staff completed the design of a World Bank project to initiate ICM programs on the west coast in Chiapas, Veracruz and Nayarit to complement investments in environmentally sound aquaculture. That same year, CRC was asked by USAID's Mexico mission to help prepare a much smaller-scale proposal for the Summit of the Americas initiative of the U.S. State Department to assist the mission's conservation partners in Mexico. Although the World Bank program was eventually cancelled, its design had a significant

influence upon the USAID initiative, which promoted a participatory approach to preparing coastal management plans, built upon existing environmental management tools and featured collaboration with universities and NGOs. The agenda laid out in the World Bank project design remains relevant a decade later as CRC works to promote aquaculture good practices in Sinaloa, CIMEX works in Nayarit's Marismas Nacionales, and USAID targets watersheds and lagoons in Chiapas and Veracruz.

The interconnectedness of events and agendas is an important element of the C^{3}EM story. This chapter highlights the context of resource management in Mexico in the 1990s, the successes and challenges facing C^{3}EM during its implementation from 1996 - 2003, and the results and lessons learned as of the project close in September 2003.

The Governance Context for Coastal Management in Mexico

A mix of global, national and local issues in the target regions of the east and west coasts of Mexico helped shape the design of the C^{3}EM. National environmental policy and leadership was galvanized in Mexico by the 1987 report of the World Commission on Environment and Development and by Mexico's adoption in 1988 of its General Environmental Protection Law. Next, the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, set the stage for Mexico's 1995 - 2000 environmental program, prepared by the newly created super-agency SEMARNAP (now SEMARNAT, Secretaria de Medio Ambiente y Recursos Naturales—the Environment Secretariat of Mexico). This marked a period of strong leadership and the energetic application of such conservation and environmental management tools as protected areas and marine parks, environmental plans for coastal areas, and enforcement of environmental laws. Important new measures included the creation of the Mexican Nature Trust (Fondo Mexicana para la Conservación y Natureleza). This fund supports a variety of site-based conservation projects and has transformed "paper parks"—i.e. parks that exist on paper but are largely non-functional—

into an effective conservation tool. The Nature Trust is currently capitalized at about US $58 million, with contributions from the Global Environmental Facility, the Government of Mexico, USAID and several private foundations.

In the mid-1990s, coastal management issues were on the national agenda. The environmental agenda included in President Ernesto Zedillo's six-year plan (1994 - 2000) called for addressing key problems in the federal coastal zone—a 20-meter-wide strip above the high water mark—including the need to clarify ownership and establish management responsibilities along the Mexican coastline. New legislation guided federal agencies in the management of fisheries, wildlife, forests and the federal coastal zone. Mexico's coastal zone management program has subsequently focused on settling title disputes and collecting revenues from concessions while other federal ministries have worked with their counterparts at the state level to oversee human settlements, urban planning, navigation, ports and tourism.

About 13.4 million people reside in the coastal region, which spans approximately 35,000 kilometers and includes 166 municipalities in 17 states. Since 1921, Mexico had a highly centralized government under the Partido Revolucionario Institucional (Institutional Revolutionary Party), which held power for 80 years. The elections of 2000 marked a major political transition as the presidency shifted to the Partido Acción Nacional (National Action Party). Since this change in government, Mexico's environmental programs have promoted decentralization and granted state and municipal agencies greater authority and decisionmaking power. The change has sparked an increasingly vocal struggle over revenue sharing between the federal government and the states. It has also created decentralized environmental programs in all three layers (federal, state and municipal) of government.

In 2003, most coastal states have their own counterparts to the federal agencies. Environmental affairs and urban development are frequently combined at the state level. Yet in 1995, at the outset of C^3EM, there was

little coordination or integration either among sectors or among federal-state-municipal lines of command. The struggle among layers of government to create effective decentralization reflects the difficulties of internal reform. However, providing a strong institutional foundation is an essential precondition for advancing ICM in Mexico.

Mexico has acknowledged the need to expand beyond the federal zone and establish an ICM framework. In 2000, the National Ecology Institute published a series of reports that summarized environmental progress under the Zedillo administration and set out agendas for the future. The recommendations outlined in the reports reflect a tacit understanding of the issues that have slowed the country's attempts at sustainable coastal development. The C^3EM is, in and of itself, a manifestation of the recommendation to "draw more fully on the opportunities for international cooperation in coastal management."

Key Coastal Biodiversity Issues facing Mexico in the mid-1990s

Establishing viable international markets for fisheries products (including farmed shrimp) and building market share in the global tourism industry are key economic objectives for Mexico. Both industries create important forces that are changing Mexico's coasts. USAID, in its 1998 – 2006 biodiversity conservation strategy, promoted ICM as an approach that could work in concert with its conservation strategies to address the issues raised by these development pressures.

Tourism

The growth and popularity of Cancun as a vacation resort, and now the largest city in the state of Quintana Roo, proved that tourism could be an important engine for economic development. It provides a physical model for tourism development—one with massive, all-inclusive resort hotels—as well as a financial model, where initial investments have ignited a long period of hotel construction and associated activities. Within just 25 years, the once sleepy village of Cancun has been transformed into a premier resort city of over 300,000 residents and spawned

a 150-kilometer tourism corridor, the Riviera Maya. This has set the stage for new plans for a tourism investment program for the southern Costa Maya—the same region where USAID's program has promoted more sustainable forms of coastal management and growth.

Tourism development has not come without costs. While Quintana Roo captures approximately one-third of Mexico's total tourism income, economic success is difficult to measure and prompts difficult questions. Are the benefits distributed fairly to communities and local entrepreneurs alike? To what extent do benefits remain in Mexico as opposed to being sent abroad to tour companies and international hotel chains? How are ecosystem services compromised by such intense coastal development and use? The National Tourism Promotion Fund (FONATUR), is proud of its role in jump-starting the tourism development in Cancun's beach zone and the Riviera Maya. However, government and citizens are now working together to address the uncontrolled secondary impacts of this growth, and address problems in implementing the local Environmental Land Management Plan that was adopted in 1994 after more than 20,000 rooms had been constructed and visitor arrivals had reached two million per year.

Today, FONATUR continues to promote mass tourism to destinations throughout Mexico's coastal zone but it is now promoting a low-impact alternative to the Cancun style of development. The newest proposal for the Gulf of California encourages a regional approach to development—26 marina sites located along a "Nautical Route." FONATUR's master plan for Quintana Roo's southern Costa Maya calls for a smaller 7,000-room tourism destination tied to a cruise ship port. It is important to note that these and other projects are now being negotiated with politicians, community groups and environmental organizations, who together are helping define a trajectory for sustainable tourism.

Fisheries and aquaculture

A motivating factor for creating marine protected areas in Mexico has been declining fisheries and biodiversity. Whether it is industrial trawl-

ing of shrimp in marine waters or increased fishing pressure on coral reefs and lagoons by artisanal fishers, conflicts are increasing and populations of fish and shellfish are declining. Artisanal fisheries have both social significance and political influence in the region. There are well over 11,000 boats in the Sinaloa region alone. Unfortunately there are few or no regulations on the species harvested.

Economic pressures for growth in aquaculture can be clearly seen in the Gulf of California, where 16 of the 20 major coastal lagoon ecosystems have been surveyed for shrimp aquaculture. About 35,700 hectares of ponds have already been built and there is a potential for 180,000 hectares more. Such a build-out would threaten these coastal ecosystems, which have important wild shrimp fisheries, internationally significant wetlands, and provide important habitats for migrating shore birds and ducks.

Mexico's strong concern for the health and good management of its bays and lagoons is reflected in its Comprehensive Fisheries Policy (*Carta Nacional de Pesca*, the National Map of Fisheries Policies) which includes a characterization, issue diagnosis and recommended actions for all of Mexico's important embayments. Nevertheless, weak enforcement and bureaucratic processes have made management of these areas a challenge.

Increases in economic investment in the fisheries and tourism sectors are deeply intertwined with demographic and environmental issues affecting quality of life in coastal regions. Mexico is using ICM tools to help address management by integrating environment, economy, and development. While advances are being made by addressing such resource management issues, the forces of internal and external change (globalization) demand major policy shifts and require that political decisions be made at larger scales.

Project Design and Operation

While the CRMP II initiatives in Tanzania and Indonesia and the CRMP I pilot sites in Ecuador, Thailand and Sri Lanka were all government-led partnerships that addressed ICM at the national level, the C^{3}EM project was directed at strengthening NGO and university institutions in targeted bio-geographic regions of Mexico. The reason for this focus was simple: Mexican law is sufficient to meet the challenges and its key institutions are already in place. The need is for an increased level of public participation and sound implementation. Place-based efforts at the community, municipal and bio-regional levels—efforts with high levels of participation and co-management—are one means for accomplishing this.

In its first two years, the C^{3}EM was funded at US $2.7 million to achieve its four key objectives. In the project's third through fifth years, USAID increased the scope of work to include the design and oversight of a field station to match Japanese Embassy funding of the facility in Mahahual in the state of Quintana Roo. All C^{3}EM partners have a successful history of fundraising and securing institutional funds to match project income. From the start, the team agreed to seek complementary projects that would substantially increase the work that could be supported through USAID funding. These efforts generated US $1 million on each coast.

As an element of the USAID Mexico biodiversity portfolio, C^{3}EM's purpose was to build the capacity of selected Mexican institutions to effectively support citizen efforts to address the multi-faceted issues affecting coastal resource condition and use. USAID's priority in 1996 was to bring an integrated approach to what it saw as a set of isolated coastal conservation projects. While Mexico has an enviable legal and administrative framework for environmental policy, there was a growing gap between stated policy and actual practice. Working through existing NGOs previously funded by USAID provided a platform to advance coastal resource governance through strategic points of entry rather than through a comprehensive national program. Often, small practical

demonstrations of coordination, cooperation and co-management can generate the hope and self-confidence needed to build demand for and capability to carry out programs of greater scope and influence.

The C^{3}EM objectives were to:

1. *Make progress in coastal management in areas adjacent to biodiversity conservation sites.*
   C^{3}EM worked in two ecologically important areas to demonstrate how coastal management could help conserve critical coastal ecosystems and build NGO and university partner capacity to contribute to a broader coastal management agenda. The C3EM sites were Xcalak and its associated coral reef ecosystem within the Meso-American Reef System; and Bahía Santa María in Sinaloa, a high-priority coastal wetland ecosystem in the Gulf of California.

2. *Promote voluntary measures to mitigate the impacts of development.*
   C^{3}EM acknowledged that most change in coastal resource use would need to be voluntary and driven by incentives for individuals and developers to adjust their activities. Toward this end, the project, in partnership with private and public stakeholders, focused on developing and applying good practices for tourism and mariculture—practices that would reduce environmental impacts, promote sustainable businesses and enhance the local distribution of benefits.

3. *Improve coastal governance.*
   The C^{3}EM project addressed the coastal policies affecting the ecosystems of Costa Maya, Chetumal (Quintana Roo), and the Gulf of California. The project contributed to the state-level coastal land use ordinances that are Mexico's primary tool for establishing use priorities in geographic areas. The objective was to strengthen institutions and policies within the targeted regions and thereby increase the prospects of success in these strategically selected sites—and then to replicate this process throughout the region. The C^{3}EM program

design emphasized participatory methods to establish co-management schemes and sought opportunities to create inter-sectoral coordination mechanisms.

4. *Increase local and regional capability to utilize ICM principles and practices.*
   C^3EM worked to build the capacity of program partners to work successfully with a diverse group of stakeholders at the community and regional levels to support the first three objectives. The project recognized that in order for participatory processes, coastal planning and decisionmaking, or the design and adoption of good practices to succeed, all three layers of Mexican government—local, regional, and national—had to be actively engaged.

Two conditions sparked the selection of Xcalak and Costa Maya as sites requiring "improved management." One was the announcement by government of plans to develop tourism along the coast of this region. Another was the request from community members to create a marine park and promote eco-tourism. The C^3EM goal was to help Xcalak and the Costa Maya as a whole to move from a threatened environmental status to one in which ecosystem quality was healthy and coastal management capability was robust. To accomplish this, C^3EM proposed using a learning-based approach.

In both the Costa Maya and Gulf of California sites, measurement of progress towards improved management was the main indicator reported annually to USAID. Advances in site management were tracked by a scorecard, adapted in part from the Mexico Parks in Peril program and the Regional Environmental Program for Central America (PROARCA). This scorecard mirrored the ICM policy cycle. (See Chapter 1.)

Step 1: Local problems identified and a shared vision prepared
Step 2: Local action plans and strategy initiated
Step 3: Local action plan approved
Step 4: Local action plans implemented
Step 5: Evaluation (addressing performance gaps) conducted

Other indicators tracked specific changes in behavior in coastal resource use and progress in policy and capacity development.

The following pages share insights into C^{3}EM strategies to achieve its goals and highlight both its successful and less successful efforts. Seven years of collaboration to improve Mexico's evolving ecosystem and land use governance system have provided CRMP II and its partners with a broader understanding of both the bottlenecks and the opportunities for reform, progress and growth of ICM as an important tool for sustainable development.

Strategies for Achieving Results

The intended strategies for each result of the C^{3}EM program describe the initial choices on direction and use of project resources. Some of these choices changed during the course of the program in reaction either to internal changes in the project and its partners, or to external changes in the issues and opportunities in the program areas. This reflects the learning-based approach that characterized the CRMP.

Strategies for formally adopting coastal management plans and selecting implementation actions along southern Xcalak Peninsula and Bahía Santa María

In both Quintana Roo and the Gulf of California, local successes have helped advance coastal management at all levels. It is the work implemented at the site level that creates concentrated effort and enthusiasm, and provides tangible evidence of the practical outputs and outcomes that can result from the investments of time, energy and money that go into studies, discussion and consensus building. Mexico has a labyrinth of area plans, impact assessment procedures and regulatory criteria—none of which converge at the scale of a coastal ecosystem and most of which have little credibility at the local level. This systems begs for an alternative approach that can demonstrate and then generate support for planning methods that cross jurisdictions and that unify stakeholders.

Such an approach would ensure sustained efforts that transcend administrations and have sustainable funding and a vibrant constituency. However, without a focus on what local people perceive as priority issues and a commitment to participation, otherwise logical and robust environmental planning can degrade into the tedious formality of preparing environmental master plans at different scales. For example, combining bay and land area decisionmaking—an idea only vaguely referred to in national law—became real and exciting when tested on the ground in both Quintana Roo and Sinaloa.

Moving from planning to implementation in Mexico means breathing new life into existing instruments. Currently, municipal and state-adopted environmental ordinances and a federal environmental regulation system that oversees coastal decisionmaking are Mexico's principal coastal environmental management tools. C^3EM's three strategic partners worked at revitalizing these instruments from different perspectives.

Closing the gap between planning and implementation meant pursuing practical projects with good chances of producing early and tangible success at various levels. In C^3EM, this included implementing specific problem-solving exercises in villages, experimenting with private enterprises to take advantage of conservation successes, reshaping legal procedures so as to engage resource users, and providing a support network to working groups. Early actions in Xcalak and Bahía Santa María were especially effective in building stakeholder confidence and providing a practical exercise for advancing local management while waiting for formal mechanisms to be put in place.

Strategies for defining low-impact practices for environmentally compatible coastal development and promoting their use by private developers and regulatory agencies

C^3EM strategic partners initially worked in sites where biodiversity was the primary concern. As programs on both coasts unfolded, partners also responded to the need to address social and economic development, and

the public health dimensions of environmental problems. These added dimensions were introduced through training events and support for business planning and supplemental livelihoods. The program has been diligent in incorporating private sector and community viewpoints on good conservation practices. It has addressed the incentives and disincentives for implementing policies and good practices.

Strategies for developing policy options for government

Coastal management is a relatively new idea in Mexico. One of its underlying foundations is the co-management of natural resources and public goods. In co-management, both government and users of common property resources take responsibility for good decisionmaking and make credible commitments to carry out these decisions. In Mexico, however, federal government holds the authority for most decisions on coastal and marine waters and resources. Nevertheless, co-management arrangements do work when appropriately staffed, funded and backed by enforcement agencies and the judicial system.

The best known example of a co-management arrangement is the pioneering work in the 1980s which led to major policy change in tropical forestry management in Quintana Roo and the establishment of the Sian Ka'an Biosphere Reserve. Forests held by *ejidos* (communities that own land in common) are now managed collaboratively with government authorities through an array of agreements that leaves management largely in the hands of the resource owners. This was a dramatic reversal in federal and state policy toward forest resources—from a situation where forest concessions were issued top down, to a situation where, today, *ejidos* have full control and make consensus-based decisions within the context of a statewide integrated decision process.

As a result, rampant deforestation and uncontrolled expansion of cattle ranching has been halted. ASK, a C^3EM lead partner, played an important role in this process. More recently UQROO has been involved in implementation and analysis of the co-management arrangements. There

were both progress and pitfalls in the co-management strategy in forests and coastal land protection in the biosphere reserve, with periods of progress interspersed with periods of "one step forward, two steps back."

The C^{3}EM program draws much from the spirit and ideas of this forestry experience. This "inheritance," however, was not fully recognized or appreciated at the outset of this project as team members and partners viewed forests and coasts as two separate realms. Nevertheless, the C^{3}EM program and its partners have encountered and tested a wide range of these co-management situations, and have promoted making them a component of Mexico's ICM "tool box."

Regional or national levels of government must support local tests of co-management practices and agreements. This is often referred to as a "two-track" approach where concurrent efforts occur at local and national levels. However, the C^{3}EM strategy used a different approach. Only after testing local efforts and as the learning and the team matured did it scale-up to regional efforts. The hope was that as local efforts were proven successful, leaders in other local sites would hear about these and adapt the approach to their own issues. Regional or national governments also began to discover their roles in supporting implementation of policies and programs through such local action. CRC played an important role in this process as well. Since the projects on the two coasts operated relatively independently from each other, cross-program exchange was difficult. CRC, however, played a facilitator role serving as a conduit for ideas and insights between both regions and helping to spread the word to other sites.

Strategies for improving capacity of the C^{3}EM partners in site management and low-impact development practices

The sheer size of Mexico's coastal zone combined with the biodiversity focus of the USAID Mexico mission created a unique situation and challenge to the CRC Mexico team. With a small budget, C^{3}EM aimed to

make a difference in some fraction of the 35,000 kilometers of coast. This challenge was exacerbated by the high cost of doing business in Mexico.

On the positive side, there were a number of encouraging factors. Mexico has a high level of technical capability within the academic, research, and NGO communities in its 17 coastal states. Many faculty and technical staff in civic associations, including CRMP II's strategic partners, were trained in the U.S. at the Master's or Ph.D. level. The Mexican government is relatively stable. Furthermore, international donor programs concerned about biodiversity conservation, including USAID, have invested in building the capacity of civic society in advocacy, effective participation in public policy and decisionmaking, and the design and implementation of co-management arrangements.

An important part of the C^3EM approach was the definition of roles of the project team members. Most C^3EM tasks were integrated into larger programs initiated and led by CRC's partners. The partners assumed the lead role in interactions with local authorities and other groups. For its part, CRC brought to the C^3EM program a broader perspective drawn from its international contacts and experience. The presence of a respected outside organization such as CRC can help partners overcome the phenomenon that "no one is a prophet in his own land" by verifying, validating and reinforcing work which the partners were already well able to carry out themselves.

At the start of C^3EM, all partners had well-trained and technically qualified staff and consultants to help carry out biodiversity conservation. The tendency in the mid-1990s, however, was to emphasize scientific and technical expertise over advocacy. Process skills—skills in building constituencies and in negotiating and implementing successful co-management agreements—however, are essential to ICM and these skills were weak. Partner organizations recognized that their staff had little experience working with community groups, the private sector, or engaging government agencies in a non-adversarial manner. Some had little experience collaborating with other NGOs or universities. CRMP II

assisted partners in convening multi-stakeholder panels, committees and organizations that could lead to establishing ICM programs robust enough to endure the three-year cycle of staff turnover and political change at the local level. The USAID annual workplan requirements and semi-annual reporting became a team-building effort, and a time to periodically assess and adapt the program.

Initial efforts in Quintana Roo did not involve UQROO. This was primarily because UQROO was not an NGO and had no prior relationship with the USAID mission. Yet, UQROO was attractive as a potential collaborator. It had an emerging role as sponsor of conferences and workshops. It had helped prepare, at the state level, the Costa Maya environmental ordinance. It had an active social forestry program. And, it had a supportive rector. An agreement was negotiated with the university in 1998 as the second phase of C^3EM was being implemented. Adding UQROO to the C^3EM team meant a significant increase in research and outreach capacity. UQROO was interested in strengthening its own educational curriculum—improving experiential learning for students and enhancing outreach programs—to encompass coastal management themes. The university partnership expanded significantly when USAID formalized its university partnership program between Mexico and the U.S. This partnership program provided needed resources for UQROO to establish a Global Information Systems (GIS) Center and initiate a master's degree in environmental planning. CRC's colleagues at URI worked with UQROO to consolidate university and research institutions in the Yucatan Peninsula (eight in total) and increase the effectiveness for data development and distribution. Similarly, URI and UQROO, and members of a consortium of universities in the Gulf of Mexico and Caribbean, collaborated in promoting regional ICM programs.

Another important partnership was with the Autonomas University of Sinaloa (UAS) in the Gulf of California. UAS has provided important technical and logistical support through its involvement in the Bahía Santa María program. The university has contributed to a strong technical and extension program for Bahía Santa María. UAS is widely respect-

ed by participants in the process for its continuing contribution to both scientific understanding and outreach to bay user groups.

Progress, Outcomes and Impacts

The C^{3}EM project has provided Mexico with important positive experiences and innovations in coastal resource management. The national coastal management proposal set forth by the National Ecology Institute and the Federal Coastal Program in 2000 cited the work in Bahía Santa María as one of the few national examples where ICM has been made operational. The Xcalak Reefs National Park was among the last designated by the Zedillo administration. It is only the second marine park to have been initiated by a Mexican community rather than the national government. The current municipal initiative for coastal management in Chetumal is proposed as part of a pilot program for decentralized management of the federal coastal zone.

Community-based Xcalak Reefs National Park

In 1995, conservationists in Quintana Roo were actively engaged in the state's reef and coastal habitats. A similar effort was underway in Belize, Mexico's neighbor to the south. Together, Mexico and Belize shared the role of protecting the Meso-American Barrier Reef that fringes the Caribbean coast from Mexico to Honduras. The decline in the fishing industry in this area had motivated the community of Xcalak to look elsewhere for its livelihood—in this case, to the possibilities that lay in tourism. Looking at the tourism industry as it had radiated southward from Cancun, the Xcalakeños saw tourism both as a promise for economic opportunity and as a threat to their environment. In 1995, the Xcalak community, in a letter from their fishing cooperative to the federal government, requested help from the ASK, CRC and others to assist Xcalak in the complicated process of issue identification, visioning, developing a plan and getting it approved. That letter set off a series of events that led, five years later, to a ceremony attended by President Zedillo to dedicate Mexico's newest national park, Xcalak Reefs National Park. The park includes 13,340 hectares of coastal waters that include the reef system and 4,037 hectares of wetlands and lagoons.

The National Commission of Protected Areas (CONANP) now jointly manages the park with the Banco De Chinchorro Biosphere Reserve. The park has received considerable national and international attention because it is one of the first national parks initiated by a community and developed in a fully participatory manner. Its visibility helps ensure it does not become a paper park, as has been the fate of many parks in Mexico and along the Meso-American Reef corridor. The C^3EM project provided funds to hire a member of the Xcalak community as the first park ranger. A Park Management Technical Committee has been established and meets regularly. In addition to having community representation, the committee is chaired by the president of the new tourism cooperative. The active participation of the community has permitted institutions such as CONANP, which operates all federal parks, to increase their commitment to co-management arrangements.

It took four years for Xcalak to win official designation as a national marine park. During this time, the project engaged the community in several early actions to practice co-management. Local fishers placed marker buoys to protect fishing no-take zones, and the fishing cooperative and independent fishers agreed to limit their activities to certain areas and use only certain gear.

In 1996, concurrent with the marine park development, the Xcalak Community Committee was formed to develop the park proposal. The committee has gone on to influence the emergence of new forms of local participation in development decisions. Some of the committee's founding members recently established the Xcalak Community Promoters, a forum formally recognized by the municipality. The women who direct the forum focused their initial efforts on solid waste, a widely recognized problem with impacts on community health and the environment.

The Xcalak Community Strategy of 1997 provided a clear statement of how the community would effectively co-manage its natural resources and improve fisheries protection, community-based tourism, and community character. Five years later, many of the elements of this vision

were being acted on. Local fishers have received training in English, birding, and fly-fishing, and have formed an eco-tourism cooperative. The cooperative signed an agreement with a regional tourism agency, with hopes that Xcalak tours will be included in the package of cruise ship excursions from vessels docking in Mahahual, 65 kilometers to the north.

Within the park, community-based reef monitoring has been initiated. While preliminary observations in the fisheries no-take zone show increasing fish populations, additional monitoring is required to ensure the statistical accuracy of these preliminary observations.

The C^3EM project has been successful in obtaining financial support to fund the Xcalak strategy from a range of donor partners, including WWF for management plan development, the Summit Foundation for expansion of community management to Mahahual, the North American Wetland Conservation Act for environmental education, and the Japanese Embassy for a research and outreach station in Mahahual.

Integrated bay management program—Bahía Santa María

A pioneering integrated management initiative in Bahía de Santa María, Sinaloa, has formulated strategies for the conservation and wise use of the bay's natural resources. The 285,000-hectare bay and watershed is a priority site for conservation, as demonstrated by its Ramsar Convention on the Conservation of Wetlands designation. It is also an important bay for fisheries and shrimp mariculture. This was the first time in the Gulf of California region that authorities, community members, and bay users were brought together to work for an extended period on a coastal ecosystem not designated as a protected area. Their time was spent identifying issues and preparing action proposals for the coastal ecosystem. Three unique elements of this process should be noted.

First, the management strategy was developed under the leadership of CIMEX, which for the first time in the Gulf area was addressing a set of issues that could not be resolved by proposing a reserve or protected

area. Second, it may be the first time in Mexican experience where two coastal municipalities came together to develop a collaborative resource management strategy. Third, the municipalities played an active role in the design of a joint implementation mechanism that includes a trust fund. This will secure and administer funds from local and state government, the private sector and donor institutions. This has given rise to an expanded bay council comprising bay users, public officials, the education community and local communities.

At the outset, a strong technical team, mainly from UAS and the Monterrey Technical Institute in Sonora, was assembled to prepare issue characterizations in Bahía Santa María. Many members of this team had studied, taught or worked together. They shared a commitment to coastal conservation and experience working with the economically productive sectors in the coast. Working groups were created within the Conservation and Development Committee (Comisión para Conservación y Desarollo, or CCD), a voluntary management committee established to represent communities, education, resource users and authorities at the three government levels. Subcommittees were formed to address five key bay themes, review information and develop action strategies. A second, parallel effort to solicit community involvement was led by PRONATURA, a leading national conservation organization in Mexico. C^3EM assisted the program by providing training workshops and events that introduced coastal management concepts. During these sessions, the CCD crafted a vision statement and goals with specific targets. This was entitled the "Declaration of Culiacan" and was signed in October 1999 by 30 municipal, state and federal authorities, as well as key university and NGO institutions. This served to catalyze intergovernmental support and demonstrated strong stakeholder commitment early in the process.

The Bahía Santa María strategy was reviewed and refined in numerous public meetings. The CCD's focus shifted from discussing issues and preparing documents to building constituencies, providing oversight for the technical work, and guiding early actions. An important turning

point was a workshop in May 2001 on "Early Actions" held in the village of La Reforma. The workshop attracted 150 participants, most of whom were women. This was the first time many local residents were exposed to the program and the event produced an explosion of effort in the five coastal communities. The bay strategy was subsequently expanded to respond to community characteristics, issues, and needs.

The bay strategy supports conservation of priority biodiversity habitats, while enhancing the economic potential in the region. Early implementation efforts included training in shellfish aquaculture, solid waste clean-up and sanitary disposal, eco-tourism and sport fishing, converting shrimp by-products into meal, and composting using worm cultivation. These efforts address the need for supplemental livelihoods. Women, who have demonstrated a great ability to organize and implement village-level projects, have been eager participants.

A goal for 2003 was the formation of a para-municipal organization to be called "Committee for the Conservation and Development of Bahía Santa María." This unique organization will be jointly managed by the municipalities of Angostura and Navolato. The associated fund will support permanent staff and offices in such actions as small-scale production projects, technical assistance to introduce good aquaculture practices, and technical assistance on issues posed by dredging and pollution control. The organization will also work to get the bay strategy endorsed by the state of Sinaloa.

One incentive behind this mobilization is the potential advantage of using coastal management programs to achieve orderly coastal development of high-value real estate. Such development results in a greater flow of federal coastal zone concession fees to the municipality. This is the case with the municipality of Navolato, which is promoting tourism and residential development in Altata, on a wide barrier spit in the bay just south of Bahía Santa María. This new growth center will be a major source of both tourism and population pressure in the region. Events in Bahía Santa María can inform the process in Altata and provide an

example of how a council of governments and citizens can unify those charged with management of the federal zone, protected areas, fisheries, navigation and freshwater flows.

CIMEX has secured multiple sources of funding for the bay project including support from 16 local and international institutions, including a consortium of funders such as USAID, North American Wetlands Council, Ducks Unlimited, the David and Lucile Packard Foundation, and WWF. It has also secured significant contributions from UAS and local groups.

Toward the Management of Chetumal Bay

Chetumal Bay is in the extreme southeast of the state of Quintana Roo, on the Yucatan Peninsula. It is a lagoon of approximately 1,100 square kilometers. The Rio Hondo, which runs along the border between Belize and Mexico from its origins in the highlands of Guatemala, discharges into the lagoon.

Chetumal Bay was selected as the geographic focus area for UQROO following a workshop held at the university in 1997. The bay's proximity to the university campus provided UQROO with convenient learning-by-doing ecosystem management opportunities. C^3EM's initial goal was to build the capacity of UQROO in ICM. UQROO committed to incorporating ICM into its research, teaching, and extension and had engaged students in facilitating policy development and promoting the use of ICM tools. This work resulted in the formal acceptance in 2002 of an Integrated Coastal Resources Management Program within UQROO's new Natural Resources Management Center.

The situation in Chetumal differed significantly from that of Bahía Santa María. The latter started at the request of the municipality of Angostura and gathered momentum when CIMEX prepared a proposal for funding that matched the priorities of the North American Wetlands Council. In Bahía Santa María, stakeholder groups as well as authorities at the federal, state and local levels saw the benefits of participating and were

enthusiastic. In contrast, resource management in Chetumal Bay has been most closely associated with the Manatee Sanctuary established by the state government in 1996. The sanctuary covers much of the bay and its wetlands, but does not address the environmental issues in the Rio Hondo watershed and the city of Chetumal. Given the absence of an overarching initiative or clearly defined public process for Chetumal Bay, the staff from UQROO have focused their efforts on extension work, especially with the smaller bay communities. UQROO has made progress in providing knowledge and scientific information about the bay. This includes developing a GIS Center and supporting the emerging bay management network.

UQROO's coastal management group has also contributed to the formation of alliances, most notably the Quintana Roo Integrated Management Network (Red de Manejo Integrado de Recursos Costeros, or RedMIRC) and the Citizens Working Group for Chetumal Bay. Through these alliances, the university works with local organizations on planning and implementation exercises to conserve and promote wise uses of the bay region. These groups have enabled UQROO to reach a larger population of stakeholders. A socioeconomic issues profile, "Our Bay, Our Future," captures the priority issues for promoting sustainable development of the Chetumal Bay area.

Working with the Private Sector to Promote Good Practices

"Good practices" are verified techniques and technologies that mitigate the social and environmental impacts of coastal uses. These practices may be codified in a regulatory framework. More often, they are used to encourage firms building coastal developments to think systematically about how to reduce the "ecological footprint" and long-term impacts of their operations. Examples of a good practice include the requirement that hotels be built away from high-risk areas, or that shrimp farms be operated with careful control of feeds and water pumping.

In 1998, there was an opportunity to apply good management practices to the development of the Costa Maya tourism corridor. The debate over land use proposals provoked an important question about the Costa Maya development process. Would a regulatory approach encourage developers investing in Costa Maya tourism projects to avoid needless environmental damage? A problem was the absence of a clear definition of "low-impact tourism development" for authorities to follow. A series of books produced in the U.S. called "Living with the Coast," combined with the work of several URI faculty and coastal specialists, became the basis of a manual for identifying the values and vulnerabilities of the coastal features of Quintana Roo. The manual offered better ways to carry out a wide range of small to large-scale development activities.

The resulting *Normas Prácticas para el Desarollo Túristica* (also published in English as *Guidelines for Low-Impact Tourism Along the Coast of Quintana Roo* [Molina et al., 2001]), provided an entry point to train government authorities on reviewing environmental impact assessments and developing policy. Over time, the guidebook has been incorporated into the impact assessment review process and federal guidelines for managing shorefront development in Quintana Roo. A recent SEMARNAT publication has incorporated much of the text of the original manual and replicated the style of providing information in a useful format to developers. Some municipalities and developers in the Gulf of California have expressed interest in creating their own *Normas Prácticas* as a tool to communicate the forms of development that best fit within their local environmental conditions.

The Bahía Santa María program has also provided an opportunity to introduce the concept of good practices as a way to supplement what was happening as a result of government regulation in Sinaloa state. CRC drew upon its mariculture experience in Central America and leveraged funding from the David and Lucile Packard Foundation to strengthen partnerships with the mariculture industry in Sinaloa.

CRC has also brought to bear worldwide information on marina good practices. Following the announcement of the Nautical Route in the Gulf of California in 2001, CRC worked with the marina industry within the Gulf of California to develop codes of conduct and build capacity for both voluntary and formal adoption of such practices. A marina working group is being established in La Paz, Baja California Sur to advance marina good practices in the bay. The group comprises marina owners, and municipal, state and federal officials. It is staffed by ISLA, a local NGO. Current efforts include conducting a survey of existing operational practices and siting criteria for establishing new marinas. This information will influence local planning activities and provide input to the national marina guidelines. This local process will hopefully be replicated in other Gulf of California harbors as marina activity increases as a result of government-promoted development programs.

In Mexico, where collective decisionmaking typically does not occur, it is particularly important to work with the private sector. Community and private interests need mechanisms to resolve problems through negotiation, joint inquiry and learning, as private decisions will ultimately dominate what happens in practice. When business people cannot or do not engage in public policy debates and decisions, the best option is to foster the voluntary use of environmentally sound practices.

While there is a critical mass of businesses and individuals willing to adopt new low-impact measures and practices, there are few or no extension programs to accelerate acceptance and implementation of those practices. Extension is a key to promoting good practices. As a result, the impetus to design and adopt good practices must come from the industry itself. Upon reflection, *Normas Prácticas* was drafted in a political environment in Quintana Roo that did not support such partnerships. Even by 2003, the forces of change still lie within the international hotel chains and cruise ship industry. Decisions on these issues are made in Mexico City or at a firm's headquarters outside of Mexico, well away from the influence of those in Costa Maya or the Gulf of California. A recent alliance with a management consulting group has

helped the C^{3}EM gain a better understanding of hotel environmental management systems and the Green Globe certification process. This involves a benchmark report that assesses and recommends improvements to existing operations. Once a firm meets standards, as determined by the accredited certification organization, it can then display a Green Globe-certified label.

To integrate good practices within a coastal management agenda, the Mexico program has built partnerships and linked with experienced organizations already working in Mexico. For example, a first step in promoting good shrimp aquaculture practices has been to collaborate with the Sinaloa Aquaculture Institute. The institute represents the state industry and has direct access to its associate shrimp farmers. Activities carried out through this partnership make it possible for C^{3}EM to understand the incentives the industry responds to, as well as obstacles hindering movement towards the use of good practices.

Two regional networks have emerged in the Gulf since the late 1990s. These are "the coalition," a group of scientists, managers, and NGO leaders who have identified conservation priorities and threats for the Gulf; and the Alliance for the Sustainability of the Coast of Northwestern Mexico (ALCOSTA), a group of civic organizations engaged in site management programs.

Seeds for the Future

Various studies have highlighted the key obstacles, challenges and opportunities facing coastal management in Mexico as Mexico's national administration makes the transition to the first non-Partido Revolucionario Institucional presidency in 80 years. In 2002, participants at a national workshops on coastal management made the following recommendations for advancing ICM in Mexico:

- Establish a national coastal management policy

- ❖ Create an integrating mechanism to unite sectors and government secretaries, and promote broad-based public participation in decisionmaking

- ❖ Ensure sustained financing essential for implementation of new policies

- ❖ Collect and analyze the information necessary to identify coastal issues and support economic development programs that directly benefit coastal communities

- ❖ Raise awareness and educate stakeholders on environmental issues to promote understanding of and value for the coast

C^3EM offers evidence of progress on these challenges. The Quintana Roo program made direct contributions to biodiversity conservation in the Meso-American Reef System through the establishment and active management of the Xcalak Reefs National Park. The program has also put into motion a number of innovative and linked efforts by NGOs, UQROO and government authorities that are creating a unique opportunity in Mexico to move forward with resource management that applies an integrated rather than a sectoral approach. UQROO is just one of the actors that has made a major institutional commitment to integrated resources management and sustainable livelihoods. It has undergone internal restructuring, revised its curriculum and started playing a stronger outreach and extension role with municipal, state and federal officials. Most actors, including UQROO, recognize that integrated resource management initiatives can improve coastal residents' quality of life, can help secure economic investment and can conserve the rich biodiversity resources that have local, national and international significance. Most importantly, the atmosphere of mistrust and isolation that existed between business, government, academia and civil society in 1996 is being replaced by a demonstrated willingness to find common ground and share responsibilities.

At the Gulf regional level, CIMEX and CRC have contributed to the creation of an alliance of civic organizations that is formulating a regional vision for northwestern coastal Mexico. Events such as the May 2001 Gulf-wide workshop in Mazatlan, Sinaloa, have brought together large representations of researchers, conservationists and officials to share information and debate key issues. The Rapid Assessment of Conservation Economics has compiled detailed information on trends in land, coastal and marine resources use, and developed economic growth scenarios.

These actions are closely tied to Mexico's larger concerns with alleviating poverty and creating sustainable forms of economic development as expressed in its country paper submitted to the 2002 World Summit on Sustainable Development: "The conditions of poverty and marginalization in which millions of Mexicans continue to live is the most important challenge facing the nation and combating poverty is one of the highest priorities of the presidency." Mexico's 2001 - 2006 national development plan aims to achieve the twin objectives of "…environmental protection and sustainable development." The key federal agencies carrying out this agenda include SEMARNAT, the National Ecology Institute, the national Environmental Law Enforcement Agency, the National Water Agency, the Secretary of Agriculture and Fisheries, the Secretary of the Navy, and the Secretary of Communication and Transport, the Secretary of Tourism, and the Secretary of Social Development. Key governors and municipalities are also incorporated in this vision.

Centralized environmental management has not served any country well over the long run. It is decentralized systems of management and power that reside in a nested framework (see Chapter 8) that offer the mechanisms for dealing with the cross-scale and cross-discipline environmental issues that dominate in coastal regions. Putting a fully functional national coastal program in place will be one of Mexico's main challenges in

the decade ahead. The experiences embodied in the C^{3}EM program provide ample evidence that Mexico can succeed in meeting these challenges. Perhaps Mexico can even surpass the global goal of having 20 percent of its coast under effective management within the next decade.

Crafting Coastal Governance In A Changing World

Stephen Bloye Olsen, Editor

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The relationship between the U.S, Agency for International Development (USAID) and the Coastal Resources Center (CRC) at the University of Rhode Island has been a true partnership. Together we have faced the difficulties, surprises and successes that mark any attempt to apply new ideas to old problems. The knowledge that we are a single team working for the same goals, and defining together the changes in strategy required by our own learning and the changing circumstances in each country and the world at large, has been central to success of the Coastal Resources Management Program.

A great many people in USAID, in CRC and in the countries where we have worked have contributed to what has been achieved and learned. The authors of this volume thank everyone involved for their creativity, their energy and their leadership in addressing the complex issues in coastal regions. Most especially we thank our in-country teams and our partner institutions who taught us how what was being learned elsewhere could be appropriately applied to their own cultures and the needs of their countries. We have not attempted to list all those that have contributed to the ideas and the experience presented in this volume. To do so would require several long paragraphs.

While so many contributors to the program, one name stands out: Lynne Hale, former associate director of CRC. Lynne left CRC in the last year of the program—but only after setting in motion the drafting and redrafting that has resulted in this volume of reflections, experience and future directions. Lynne was CRC's point person with USAID. She led the design of the CRMP II field programs and made sure that they capitalized on what had been learned from the first set of filed programs. Throughout the 18 years of the program Lynne's passion, perseverance and perception made it the success it became. All who have contributed to this volume thank her and wish her well in the next stage of her career.

Preface

Oceans, Coasts, Water, and the Evolving USAID Agenda

By Bill Sugrue
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Since 1985, the U.S. Agency for International Development (USAID) has partnered with the University of Rhode Island Coastal Resources Center (CRC) in carrying out the Coastal Resources Management Program (CRMP). CRMP is a pioneering initiative working with developing countries around the world to advance the principles and practices of integrated coastal management (ICM). During this 18-year partnership, USAID and CRC, together with partners in the field, have learned a great deal about the complexities and challenges of better managing our coasts. This has included learning how to balance the need for ecologically healthy coasts with the need to promote a better quality of life for those who live and work there. Throughout this process, CRC has been an instrumental force in promoting a "learning agenda" for (ICM). In the selected CRMP stories included in this book, you will share in some of that learning. Let me summarize here some of the key principles that underlie the ICM learning agenda.

Advance Integrated Water and Coastal Resources Management for Improved Environmental Protection and Management

It is essential that ICM and integrated water resources management (IWRM) be mainstreamed into sustainable development efforts. ICM and IWRM are essential foundations for improvements in health, food security, economic development, democracy and governance, and biodiversity conservation. We must recognize the interdependence of these development goals. The interdependence of human health, food security, governance and the other human activities is obvious. How development objectives are pursued in these sectors can have dramatic impacts on biodiversity, and on the biosphere. The biosphere is currently in free-fall, so the significance of these impacts is not trivial. Conversely, biodiversity conservation programs, properly conceived, can significantly support CRMP objectives in economic development, food security, governance and other areas. The challenge to development assistance organizations is to ensure that they move beyond single sector responses to more integrated, cross-sectoral approaches that do justice to the exceedingly complex and interrelated factors that shape our world. Principles of integration as practiced in ICM and IWRM must be given the commitment of time and resources that they deserve.

Create Strong Governance at All Levels

Good governance is more than just good government. It encompasses a range of processes in which public, private and civil societies organize and coordinate with each other to make decisions, and distribute rights, obligations and authorities for the use and management of shared coastal resources. A central operating principle of the CRMP has been that effective governance systems are what create the preconditions for achieving sustainable environmental and social benefits. We have learned that good coastal governance functions best when it exists as part of a nested system—that is, one that operates simultaneously at scales ranging from the local to the global. For example, sub-national and community-based management efforts stand the best chances to be effective and to be sustained

over the long term when they are supported by policies and institutional structures at the national level. Meanwhile, national-level initiatives build capacity for ICM governance across spatial and sectoral scales, providing support to local initiatives while addressing coastal development and conservation of more wide-ranging national interest.

Promote Private and Public Partnerships

Participatory approaches to conservation are now recognized as one of the few means to ensure sustainable management of ecosystems and natural resources while also meeting local peoples' livelihood needs. This participation is most effective when it includes both the public and private sectors. ICM and IWRM are too complex for one institution or group of constituencies to "go it alone." Forging carefully selected, strategic private-public partnerships can help.

Eco-tourism is just one of the issues around which coastal programs are testing such partnerships. The hope is that by partnering with the private tourism sector, chances improve for achieving environmentally sound, financially sustainable, and culturally appropriate coastal tourism development. When these partnerships succeed, eco-tourism can have significant, positive impacts on local economies and can provide strong incentives for sound environmental protection and management. A caution is that "environmentally sound" and "culturally appropriate" cannot be throwaway lines. They need to be taken seriously. Not all eco-tourism is very "eco," and unless there is true and transparent participation—i.e. the local community is fully engaged, not simply consulted—the impact of tourism on local communities can be destructive economically, socially, and culturally, and the impact on the environment catastrophic and permanent. It is not easy to do this right—but it is essential to do so.

Empower Coastal Communities to Self-manage Their Resources

This must be done while promoting alternative livelihood and food security objectives. In cases where local social and economic networks are

already well established and thriving, even at relatively low income levels, poorly conceived outside interventions can be extremely and negatively disruptive. Since poverty is not solely a function of income, but also of control of assets, empowerment, and control over one's fate, even the most well-intentioned efforts at poverty reduction or economic growth can have the opposite effect on people if existing arrangements are not taken fully into account. This is especially worthy of consideration in the case of indigenous communities. In such cases, poverty prevention, rather than poverty reduction, may be the appropriate goal. In this way, intact communities with essentially sound traditions of resource management may best be assisted by simply strengthening and supporting their control over local resources. Only modest, incremental initiatives aimed at ensuring continued food security and additional income streams may be called for; but here again, full engagement of the community, not simply consultation, must be the norm.

Advance Institutional Strengthening and Capacity Building at Both the National and Local Levels

Inadequate capacity to practice ICM and to design and implement strategies that lead to more sustainable forms of coastal development remains a primary factor limiting progress in ICM. Too often, development projects bring in external expertise and funding without a parallel effort to build and strengthen in-country partner organizations—leaving partner organizations and the larger ICM effort vulnerable to failure when outside assistance ends. CRMP has used a different approach. Its preference has been to strengthen institutions over extended periods of time and to transfer the skills and the responsibilities for implementation to CRMP collaborating organizations. This approach is grounded in the belief that long-term collaborative relationships with partners maximizes learning and increases the probability that productive efforts will be sustained over many years.

The CRMP experience has also demonstrated the value to be derived from cross-portfolio learning. For example, we have seen how communities in the Philippines that developed community-based marine sanctuaries were able to provide useful insights to Indonesian practitioners attempting to

establish their own marine reserves. Similarly, experience in Ecuador and Sri Lanka in the development of shoreline management guidelines helped CRMP undertake the process more efficiently in Tanzania.

While USAID, through its overseas missions, presently supports coastal and marine activities in over 40 countries, only a small handful of those USAID missions have been able to invest in a more comprehensive ICM approach, with broad attention to all of the general principles cited above. The challenge remains to enhance the dialogue between development agencies and national governments on the economic, social and environmental values of marine and coastal resources, and the proper level of investment to maintain these resources as national and local assets. These priority challenges, which must be faced, and which will help guide USAID's future directions include the need to:

- Mainstream applied fisheries research and management into ICM programs, and promote effective governance of commercial, artisanal, and subsistence capture and culture fisheries. Science and technology advances must influence decisions on coastal resource management in a context of good governance. Both are crucial.

- Establish networks of marine protected areas with substantial ecological reserves in all regions, while ensuring the sustainability of these activities through the development of alliances and partnerships. Conservation groups and their allies in government and the private sector have made good progress over the past 20 years in establishing parks and reserves to preserve terrestrial biodiversity. The scientific basis for defining these reserves, and managing and linking them, has grown more sophisticated. The number and variety of partners supporting these efforts has grown as well. Coastal and marine reserves need to catch up. Strong partnerships among conservation groups, government, the private sector, and local communities will be essential.

- Enhance coastal and nearshore water quality through partnership programs to control both point and non-point sources of marine pollution, while addressing the impact of the growing number of coastal megacities. There has been little meaningful engagement in a significant way with the challenges of coastal resource management in the context of megacities. This is a huge challenge that needs to be confronted for reasons of human welfare and environmental quality.

- Reduce the vulnerability of coastal populations and their infrastructure to the growing threat of flooding, storm surge, and coastal erosion due to climate change and rising sea levels. Mitigation efforts are essential. A great deal remains to be done that has not yet been done. But serious—even drastic—efforts in mitigation do not eliminate the need to undertake, simultaneously, ambitious initiatives in adaptation because sea level rise and other effects of global climate change seem inevitable.

What is next? Clearly, coastal and freshwater management challenges and needs will not abate in the foreseeable future. World leaders reaffirmed at the 2002 World Summit on Sustainable Development in Johannesburg the central role that these resource issues will continue to play in the sustainable development agenda. USAID is in full agreement with that affirmation and remains committed to full engagement on these issues.