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## Protection, Participation, and Public Awareness: Indonesia Coral Reef Rehabilitation and Management Project

### Social Development Best Practice Elements

- Participatory processes in preparation and implementation
- Institutionalized mechanisms for decentralized implementation
- Ongoing monitoring and evaluation of social development outcomes by the government and community

The Indonesia Coral Reef Rehabilitation and Management Project (COREMAP) is the first operation supported by the World Bank to focus exclusively on coral reef ecosystems.

This ecosystem contains the world's richest coral reef, fish, and marine invertebrate biodiversity. It also provides a livelihood for many poor fishers, while being a potentially lucrative site for Indonesian business development. Balancing these economic needs while protecting a fragile ecosystem is one of the project's many challenges.

### Project Objective

COREMAP's objective is to establish a viable framework for a national coral reef management system. The project has four components:

1. Program strategy and management
2. Public awareness
3. Surveillance and enforcement
4. Community-based management.

COREMAP is being implemented in 10 provinces over 15 years, during which period the communities are given incentives, training, and resources to protect the coral reefs.

### Capacity Building in Project Development

Awareness is growing in Indonesia that government agencies cannot effectively manage such extensive reef areas without the close involvement of coastal villages and community-based management. COREMAP requires capacity building and coordination among government agencies, the private sector, local nongovernmental organizations (NGOs), and village communities.

#### *Local Capacity Building*

Creating awareness and building capacity at the community level have been the twin strategies of the project since its inception in 1998. The grassroots approach was gleaned from other successful coastal projects in the Asia-Pacific Region. In those projects, involving all relevant

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stakeholders, particularly coastal communities and powerful decisionmakers, has been necessary to guarantee the successful implementation of management strategies.

The idea for COREMAP emerged from a local source: a diving club that included several government ministers. Recognizing that the coral reefs were under serious threat, the group began to make the national public aware of the problems by allowing the press to follow them on their diving trips.

#### **Importance of Coral Reefs**

Coral reefs are a major productive and aesthetic asset in Indonesia. Approximately two-thirds of Indonesia's coastline is bordered by coral reefs, which play vital roles in coastal fisheries, marine tourism, and protection of coastal areas against wave erosion. They also provide habitats for numerous marine organisms. Healthy reefs are an important source of food and economic opportunities for some 67,500 coastal villages.

Approximately 70 percent of the reefs in Indonesia are in poor to fair condition, due primarily to sedimentation, land-based pollution, coral mining, physical damage, and over-extraction of marine products. In recent years, illegal, destructive practices such as using explosives and poison to fish have markedly increased, exacerbating the threat to the ecosystem.

Nevertheless, there are many hurdles to overcome. Local communities are the focus of unsustainable activities by tourism developers and external fishers, often with conflicting interests. For coral reef management strategies to succeed requires more than an ecosystem approach to problem solving. A combination of local incentives, effective enforcement, demarcation of user rights, conflict resolution skills, and involvement of communities in collaborative management is necessary.

Among the efforts underway at the local level are:

- *Extensive NGO involvement* to assist in conducting *social assessments* in the villages.
- *Field managers* are placed on islands by NGOs for several months to create awareness and support for the project, as well as to form groups to assist in project implementation.

- *Community support groups* have been formed around components of the project, such as project management, monitoring, and productive activities.
- *Communities propose their own approaches* to coral reef rehabilitation, monitoring, infrastructure improvements, and alternative village-based income generating strategies (ecotourism, handicrafts, alternative fishing).
- *Community representatives integrate lessons learned* by visiting places, such as the Philippines, in which similar approaches have proven successful.
- *"Reef watchers"* monitor the reefs at the community level. Young people patrol the coastal areas with two-way radios and, in some cases, patrol boats. If they note a violation of reef protection, they alert the Monitoring Unit, which has the authority to arrest violators.
- *Conflict resolution mechanisms* have been instituted in the Taka Bone Rate Park Preserve to address possible conflicts among different user groups, whether among local users or between outside users and local users.

#### *National Capacity Building*

Coastal management in Indonesia has suffered from institutional ambiguities and overlaps at both the national and regional levels. Human resources capacity for coastal zone management remains weak. In addition, sector-based strategies are imperiled by limited information on the status of the resources and lack of integration in regional spatial planning. Weak enforcement of existing regulations and lack of delineation have hampered marine management over nearshore areas.

Since a community-based management approach cannot be successful without a supporting legal and administrative framework, a national strategy on coral reef preservation has been established. Some of the efforts being implemented on a nation-wide basis include:

- *Ministry of Maritime and Fisheries*, created to champion coral reefs management.

- *Coral Reef Information Network*, capable of providing public information and guidelines on coral reef status and management.
- *National public campaign* to raise public awareness of, and participation in, marine conservation in Indonesia via television, radio, NGOs, and schools.
- *Public surveillance system*, coordinated with the help of local “reef watchers,” who monitor, identify, and report any reef violations. Capacity of the national government to implement this component is being enhanced through a program for enforcement officers.

#### **Lessons Learned**

- Participation of local communities in project design builds sustainability and leads to greater ownership.
- Creating partnerships between local universities and NGOs supports project implementation.
- Capacity building on the local level enables communities to participate in ecosystem management.
- Establishing conflict resolution mechanisms facilitates access of different user groups to natural resources.

### **Social Analysis**

Considerable investment has gone into social analysis and data collection to ensure development of culturally appropriate management plans, with provision made for continuing participatory approaches during implementation. Consultations were held with both provincial and district level task forces and with village development councils. Village leaders facilitated one-day community participatory workshops in each location. Participants included representatives of village government and community groups, traditional and religious leaders, fishers, boat operators and small traders, school teachers, and other members of the community.

Interviews, focus groups, Participatory Rapid Appraisals (PRAs) at selected sites, and questionnaire surveys provided key information for planning activities and identified potential issues or conflicts. Local NGOs partnered with local universities in carrying out social assessment activities.

Because the entire project is aimed at strengthening community rights to local resources and improving development benefits through income-generation activities for those communities, an Indigenous Peoples Development Plan was not deemed necessary.

The participatory approaches will continue during project implementation through the following activities:

- *Public awareness component*. Support for information dissemination and awareness about the project is targeted at key stakeholders at the national, regional, and local levels. NGOs and local communities are expected to participate directly in these activities.
- *Establishment of local committees to enable feedback and information from stakeholders on project implementation*. Community Support Groups will play key roles in resolving user conflicts.
- *Strengthening traditional inter-village councils*.
- *Support for community-based management activities involving local NGOs*, including the development of participatory zoning and management plans, PRAs, and participatory beneficiary monitoring of reef activities.

### **Outreach to Vulnerable Groups**

Given that Indonesia comprises more than 17,000 islands and that many of those who live on these islands depend on the coastal waters for income, the project must simultaneously address economic and ecological issues. Finding alternative and sustainable income through microenterprises for fishers, many of whom are poor, is a complex undertaking at the community level.

Community preparation activities include strengthening village groups, developing conflict resolution provisions, improving access to credit, and strengthening terms of trade with existing middlemen. Isolated vulnerable groups, such as the Bajau, nomadic fishermen, are integrated in the community plan to minimize the social impacts on their livelihoods. Traditional fishers are also allowed to continue to operate in Taka Bone Rate

Park outside of the strict conservation areas. A conflict resolution mechanism was created to address possible conflicts between the Bajau and other user groups.

Women in the 10 project communities play a central role in the household economies by processing fish, marketing products, and reef gleaning. For some communities, the curtailment

of the collection of certain types of invertebrates and destructive reef gleaning must be considered jointly by the community as part of local reef management plans, since women may experience the possible loss of income and food. In these cases, the project assists women through targeting microenterprise development, improving their access to credit, and creating gender-sensitive empowerment activities.

