

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: 31667

IMPLEMENTATION COMPLETION REPORT
(SCL-43050 TF-29282 TF-28373 TF-28461)

ON A

LOAN

IN THE AMOUNT OF US\$6.9 MILLION

AND A GRANT FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF SDR 3.1 MILLION (US\$4.1 MILLION EQUIVALENT)

TO THE

REPUBLIC OF INDONESIA

FOR THE

CORAL REEF REHABILITATION AND MANAGEMENT PROJECT

March 22, 2005

Rural Development and Natural Resources Sector Unit
Indonesia Country Office
East Asia and Pacific Regional Office

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS

(Exchange Rate Effective as of Closing Date, July 31, 2004)

Currency Unit = Rupiah (Rp.)
 Rp. 1,000 = US\$ 0.110
 US\$ 1 = Rp. 9125

FISCAL YEAR
 July 1 - June 30

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	<i>LIPI</i>	Indonesian Institute of Sciences
AIG	Alternative Income Generation	<i>LKM</i>	Community Credit Institution
Amsat	Australian Marine Science and Technology Limited	MCS	Monitoring, Control and Surveillance
APL	Adaptable Program Loan	MCSIS	Monitoring, Control and Surveillance Information System
AusAID	Australian Agency for International Development	M&E	Monitoring and Evaluation
<i>BAPPEDA</i>	Regional Planning and Development Agency	MMAF	Ministry for Marine Affairs and Fisheries
<i>BAPPENAS</i>	National Development Planning Agency	MOU	Memorandum of Understanding
<i>BPD</i>	Village Parliament	MPA	Marine Protected Areas
<i>BPKP</i>	National Internal Audit Agency	MTR	Mid-term Review
<i>Bupati</i>	District Head	NGO	Non-government Organization
CAS	Country Assistance Strategy	NRM	Natural Resource Management
CBM	Community-Based and Collaborative Management	NPV	Net Present Value
COREMAP	Coral Reef Rehabilitation and Management Program	OD	Operational Directive
CRITC	Coral Reef Information and Training Center	OED	Operations Evaluation Department
CRMP	Coral Reef Management Plan	OM	Operational Manual
CRMP/RPTK	Village Coral Reef Management Plans	OP	Operational Policy
<i>DPR</i>	House of Representatives	PA	Public Awareness
<i>DPRD</i>	Regional House of Representatives	PAD	Project Appraisal Document
ERR	Economic Rate of Return	<i>Perda</i>	Regional Government Regulation
FRR	Financial Rate of Return	<i>PIMPRO</i>	Project Manager
GEF	Global Environment Facility	PMO	Project Management Office
GIRMaC	Integrated Marine and Coastal Resources Management Project	PMU	Program Management Unit
IBRD	International Bank for Reconstruction and Development	<i>Pokja</i>	Working Group
ICR	Implementation Completion Report	PPAR	Project Performance Assessment Report
IUCN	The World Conservation Union	PSR	Project Status Report
<i>Lapan</i>	Indonesia Aerospace Agency	QAG	Quality Assurance Group
		SDR	Special Drawing Rights
		<i>SK</i>	Executive Decree
		TA	Technical Assistance
		TF	Trust Fund
		TTL	Task Team Leader

Vice President:	Jemal-ud-din Kassum, EAPVP
Country Director	Andrew D. Steer, EACIF
Sector Manager	Mark D. Wilson, EASRD
Task Team Leader/Task Manager:	Thomas Walton, AFTSD

IMPLEMENTATION COMPLETION REPORT

INDONESIA

CORAL REEF REHABILITATION AND MANAGEMENT PROJECT

SCL-43050, TF-29282, TF-28373, TF-28461

CONTENTS

	Page No.
1. Project Data	1
2. Principal Performance Ratings	2
3. Assessment of Development Objective and Design, and of Quality at Entry	2
4. Achievement of Objective and Outputs	3
5. Major Factors Affecting Implementation and Outcome	7
6. Sustainability	8
7. Bank and Borrower Performance	9
8. Lessons Learned	13
9. Partner Comments	14
10. Additional Information	15
Annex 1. Key Performance Indicators/Log Frame Matrix	18
Annex 2. Project Costs and Financing	19
Annex 3. Economic Costs and Benefits	21
Annex 4. Bank Inputs	22
Annex 5. Ratings for Achievement of Objectives/Outputs of Components	25
Annex 6. Ratings of Bank and Borrower Performance	26
Annex 7. List of Supporting Documents	27
Annex 8. Beneficiary Survey Results	28
Annex 9. Stakeholder Workshop Results	29
Annex 10. Borrower's Evaluation Report	31

Map IBRD # 29352R

<i>Project ID:</i> P036048	<i>Project Name:</i> Coral Reef Rehabilitation and Management Project (COREMAP)
<i>Global Supplemental ID:</i> P040062 (<i>Fully Blended</i>)	<i>Supp. Name:</i> Coral Reef Rehabilitation and Management Project (COREMAP)
<i>Team Leader:</i> Thomas E. Walton	<i>TL Unit:</i> AFTSD
<i>ICR Type:</i> Intensive Learning Model (ILM) of ICR	<i>Report Date:</i> March 24, 2005

1. Project Data

Name: Coral Reef Rehabilitation and Management Project (COREMAP) *L/C/TF Number:* SCL-43050; TF-29282

Country/Department: INDONESIA *Region:* East Asia and Pacific Region

Sector/subsector: General education sector (37%); Sub-national government administration (26%); Central government administration (21%); Other social services (13%); Law and justice (3%)

Theme: Biodiversity (P); Environmental policies and institutions (P); Water resource management (P); Other rural development (S); Law reform (S)

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 07/21/1995	<i>Effective:</i> 04/15/1997	06/30/1998
<i>Appraisal:</i> 11/26/1997	<i>MTR:</i> 01/15/2000	11/07/2000
<i>Approval:</i> 03/31/1998	<i>Closing:</i> 10/31/2001	07/31/2004

Supplemental Name: Coral Reef Rehabilitation and Management Project (COREMAP) *L/C/TF Number:* TF-28373; TF-28461

Sector/subsector: Other social services (32%); General education sector (30%); Central government administration (19%); Sub-national government administration (16%); Law and justice (3%)

Theme: Biodiversity (P); Environmental policies and institutions (P); Water resource management (P); Other rural development (S); Law reform (S)

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>GEF Council:</i> 06/21/1997	<i>Effective:</i> 04/15/1997	06/30/1998
<i>Appraisal:</i> 11/26/1997	<i>MTR:</i> 01/15/2000	11/07/2000
<i>Approval:</i> 03/31/1998	<i>Closing:</i> 10/31/2001	07/31/2004

Borrower/Implementing Agency: Government of Indonesia/Indonesian Institute of Sciences; BAPPENAS

Other Partners: Asian Development Bank; Australian Agency for International Development

STAFF

	<i>Current</i>	<i>At Appraisal</i>
<i>Vice President:</i>	Jemal-ud-din Kassum	Jean-Michel Severino
<i>Country Director:</i>	Andrew D. Steer	Dennis de Tray
<i>Sector Manager:</i>	Mark D. Wilson	Geoffrey Fox
<i>Team Leader at ICR:</i>	Thomas E. Walton	Sofia U. Bettencourt
<i>ICR Primary Author:</i>	Thomas E. Walton; John Virdin	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

	<u>Rating</u>		
<i>Outcome:</i>	S		
<i>Sustainability:</i>	L		
<i>Institutional Development Impact:</i>	SU		
<i>Bank Performance:</i>	S		
<i>Borrower Performance:</i>	S		
		QAG (if available)	ICR
<i>Quality at Entry:</i>	HS		S
<i>Project at Risk at Any Time:</i>	Yes		

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

The Government of Indonesia launched the Coral Reef Rehabilitation and Management Program (COREMAP) in May 1998 as a 15-year program financed by multiple donors and to be implemented over three phases, with the objective “... to protect, rehabilitate and achieve sustainable use of coral reefs and associated ecosystems in Indonesia, which will, in turn, enhance the welfare of coastal communities”. The three phases (and implementation periods) were envisaged as: (i) COREMAP Phase I: Initiation (1998-2001); (ii) COREMAP Phase II: Acceleration (2001-2007); and (iii) COREMAP Phase III: Institutionalization (2007-2013). The objective of Phase I was “... to establish a viable framework for a national coral reef management system in Indonesia”. This development objective was clear and resulted from a consensus between the Borrower and the Bank and a large body of analytical work and expertise. It was consistent with the Country Assistance Strategy (CAS) at the time, which gave a high priority to sustainable resource management, and with the broad objectives of the Bank’s Environment Strategy to protect environmental commons. It is consistent with the current CAS in three dimensions: focus on poverty alleviation, improved governance, and support to decentralized resource management.

3.2 Revised Objective:

There were no revisions made to the Development Objective.

3.3 Original Components:

There were four components in the Bank/Global Environment Facility (GEF) Trust Fund-supported part of COREMAP Phase I.

- **Program Strategy and Management** – designed to lay the foundation for the COREMAP Program. This component was intended to produce: (i) the policy and strategic framework for the program, (ii) a strengthened legal framework for coral reef management in Indonesia, (iii) project management, and assessment of lessons learned, and (iv) an independent evaluation of COREMAP I and preparation for COREMAP II.
- **Public Awareness (PA)** – designed to educate the public on the nature of coral reef threats, foster public stewardship towards Indonesia’s reefs, and change destructive behavior. This component included the provision of services, workshops, publications, awareness materials, surveys and awards in support of: (i) a national multi-media awareness campaign, (ii) regional campaigns in COREMAP I pilot sites, and (iii) public relations and dissemination of guidelines.

- **Monitoring Control and Surveillance (MCS)** – designed to curb destructive practices on coral reefs. This component included the provision of technical assistance, surveillance equipment, studies, surveillance operations, workshops and incremental staff costs in support of (i) a national surveillance and enforcement unit, (ii) surveillance and enforcement operations at target project sites, and (iii) surveillance training.
- **Community-Based Management (CBM)** – designed to improve the condition of coral reef ecosystems in two pilot sites through the design, implementation and monitoring of reef management plans by local communities.

These four components were clearly related to the Development Objective, as all current strategies, lessons learned and analytical work on the subject of sustainable management of coral reef ecosystems suggest the need for a supporting legal and policy framework, public awareness to change the destructive behavior affecting the sustainability of reef systems, surveillance and enforcement to add additional incentives to discourage such behavior and, most importantly, community responsibility for activities affecting local reefs. Two other components integral to the COREMAP program - Research and Monitoring, and Training and Institutional Strengthening - were financed in parallel projects by the Asian Development Bank (ADB) and the Australian Agency for International Development (AusAID), respectively. ADB and AusAID each financed one additional site for CBM, giving a total of four pilots.

3.4 Revised Components:

There were no revisions made to the components of the project.

3.5 Quality at Entry:

COREMAP I was rated Highly Satisfactory for quality at entry by the Quality Assurance Group (QAG) in 1998. In addition, the program received a President's Award for "the development and delivery of adaptable lending instruments" in 1999 and a Social Development Award for Excellence in Project Quality in 2000. The design of the program as an adaptable program loan (APL) was appropriate, given the need for flexibility and learning over the long period of time required to change the incentives encouraging the destructive behavior threatening the coral reef ecosystems in Indonesia.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The extent to which COREMAP I achieved its development objective and intended outputs has been reviewed independently twice. *The Independent Evaluation* designed into the project was conducted by the International Union for Conservation of Nature (IUCN) in 2002, and the Bank's Operations Evaluation Department (OED) released a *Project Performance Assessment Report (PPAR)* on COREMAP I in April 2004. In addition, the Program Management Office (PMO) in the Indonesian Institute for Sciences (LIPI) produced a *Final Completion Report* for COREMAP Phase I in October, 2003. Project activities in the final extension period up to July 2004 were reported in LIPI's Implementation Completion Report of October 2004.

According to the Project Appraisal Document (PAD), the success of COREMAP Phase I in achieving the development objective would be measured by five key performance indicators, which would also act as triggers for proceeding with Phase II of the APL. The Independent Evaluation concluded that these triggers had been met, not perfectly but enough to warrant the second phase. The PPAR rating was Marginally Satisfactory but it did not take into account progress made during the third extension which was approved after the PPAR mission. Both independent reviews provide corroboration for the Implementation Completion Report (ICR) mission's conclusion: **COREMAP Phase I is rated as Satisfactory.**

Key Performance Indicator 1: Completed national COREMAP program policy and strategy discussed with key stakeholders. Ministerial letter from BAPPENAS issued, recommending the implementation of the strategy to the involved agencies. COREMAP II sites and design in accordance with the strategy. The program made substantial progress in conceptualizing, drafting, disseminating and gaining acceptance for key elements of the legal framework needed to support the implementation of community-based coral reef management, including support for:

- A National Policy and Strategy for Coral Reef Management in Indonesia, which was published and submitted to the Ministry for Marine Affairs and Fisheries (MMAF) after a series of national and provincial consultative workshops. MMAF subsequently drafted a Ministerial Decree “Concerning General Guidelines for Coral Reef Management” to promulgate the policy and strategy. This decree, still in draft at loan and grant closing, was formally issued on September 17, 2004.
- Seven drafts of legislation and twelve legal papers, some of which served as inputs (along with the National Policy and Strategy) to MMAF for drafting the revised Fisheries Act and the Coastal and Marine Resources Management Act.
- A district law (*PerDa*) on “Management of Marine and Coastal Resources in Kabupaten Selayar” defining permitted and prohibited activities and setting penalties. It was enacted as PerDa No. 16, December 3, 2003.
- A district law (PerDa No. 17) “The Utilization of the Conservation Area in Taka Bone Rate National Park”, in order to coordinate MCS activities for the park. It legalizes the zonation of the national marine park that was formulated in COREMAP I, including the community marine reserves.
- A draft district law, submitted to the District Legislature for approval, on the “Management of Land, Coastal and Marine Resources in Biak Timur and Padaido” to institutionalize local rules and customs for marine resource management in the communities.

Key Performance Indicator 2: Institutional capacity evaluated as sufficiently improved to enable expansion of COREMAP Program. A national PMO was established at LIPI in Jakarta, and provincial and district level working groups (*Pokja*) were established for the two pilot sites made up of relevant agency representatives coordinated by the provincial and district planning bureaus (BAPPEDAs) and supplemented by staff from local Non-Government Organizations (NGOs) and universities. In 1999 a decision was made to transfer responsibility for Phase II to the newly-created MMAF (leaving LIPI in charge of Phase I until its conclusion), firmly institutionalizing the COREMAP Program within the overall government infrastructure. However, after the administrative decentralization in Indonesia that occurred in 2001, the *Pokja* took on substantially greater importance in COREMAP I and have become the focal points for execution of COREMAP II. In the PPAR, OED noted that they were active, with a record of regular meetings, effective inter-agency coordination, project management, progress reports, support from the District Regents (*Bupati*) and positive engagement with the District Legislatures. The Independent Evaluation judged that the institutional capacity for the program was sufficient to warrant expansion to Phase II, given the new context of decentralization. OED noted that sustainability remains to be demonstrated.

Key Performance Indicator 3: Compliance rates (number of patrol days without violation/total patrol days) increasing by 10 percent in pilot sites, following introduction of MCS system. According to the Independent Evaluation, “a very high level of community involvement in coral reef resource management was achieved in a few pilot areas, resulting in a significant reduction in illegal and destructive fishing and coral mining in most of the pilot sites by more than 50 percent”. While the data is rough, records from Padaido show that the annual rate of bomb fishing or poison fishing violations recorded per patrol increased initially from 7 per every 100 patrols in 2001 to 30 in 2002 (the increase probably an artifact caused by improved surveillance) but then decreased by over half in the initial months of 2003 to roughly 12 per 100 patrols. In Selayar, the rate of fishing violations recorded per patrol decreased from roughly 39 per 100 patrols in 2002 to 18 per 100 patrols in 2003.

Key Performance Indicator 4: CBM pilots evaluated as workable models, and lessons of experience incorporated into the design of Phase II. The pilot in Selayar began with the contracting of a local NGO in 1999 and has made significant progress, with seed funds used by the communities to establish revolving funds to support

local enterprises and village grants applied to construction of village infrastructure. Because of unavoidable delays resulting from late site selection (see 5.1 below) and conflicts over the contracting of the local NGO, the pilot activities in Biak did not begin until 2002. CBM in Biak nevertheless disbursed one round of village grants during the final extension period. Overall, **these pilots have been judged by the Independent Evaluation to be workable models, whose lessons have been incorporated into the design of COREMAP II.** However, according to the OED PPAR, it is still too early to conclude that the piloted design is sustainable and will yield the expected benefits in terms of village development and coral reef protection. There are, nevertheless, grounds for optimism: most of the communities in Taka Bone Rate are taking a small amount of the interest on revolving fund loans and using it to sustain reef conservation activities, including the reef watchers tasked with protecting the reef sanctuaries.

Key Performance Indicator 5: 75 percent of outputs and disbursements reached. COREMAP I implemented satisfactorily. The output and disbursement targets had been reached by the time of the Independent Evaluation. At completion, the program had disbursed over 99 percent of the Bank loan and 99 percent of GEF funds.

4.2 Outputs by components:

The four components were expected to achieve outputs to meet the five key performance indicators discussed above. The planned and achieved outputs are summarized below.

Program Strategy and Management (US\$ 2,900,000) - Satisfactory

- *Strengthened program management.*
- *Strengthened national policy, strategic planning and legal framework for coral reef management.*
- *Design of COREMAP II Program completed.*

The PMO was able to manage the project to successful completion, despite shortcomings in staffing and organization described in 5.2 and 5.3 below. The legal framework for coral reef management in Indonesia has been strengthened as a result of COREMAP I, although some key pieces of legislation still must be enacted (this will be a key provision of COREMAP II). Lastly, the design of COREMAP II was completed, based in large part on the results of the Independent Evaluation of COREMAP I, and the Phase II Program was approved by the World Bank's Board of Directors on May 25, 2004.

Public Awareness (US\$3,900,000) – Highly Satisfactory

- *National and local campaigns for coral reef management designed and launched*
The national and local campaigns launched in Phase I included a series of national television programs, pamphlets, mobile displays, production of a popular song, radio programs, teacher kits and training, coral reef education curriculum developed for school classrooms, and a Coral Reef Ambassador Program for youth education. A.C. Neilson surveys provided several quantitative measure of effectiveness: an exit survey showed that by December 2001, 71 percent of the public in five of Indonesia's largest urban areas was aware of COREMAP's *Selamatkan Terumbu Karang--SeKarang!* (Save the Coral Reefs—Now!) campaign, up from 39 percent in the baseline survey. In coastal communities, recognition of COREMAP as a locally active organization increased from 3 percent to 64 percent. At the beginning of the campaign, only 25 percent of people surveyed reported having attended a community meeting on marine resource management; that percentage had increased to 45 percent at the campaign's end. There were also indications of positive impact on behavior: 39 percent of fishermen with low to medium exposure to COREMAP reported using reef-friendly fishing gear as compared to 46 percent with high exposure. Finally, in 2002 this component was presented with the Gold Quill Award for effective communication by the International Association of Business Communicators.

Surveillance and Enforcement (US\$ 4,000,000) - Satisfactory

- *Models of coral reef surveillance and enforcement tested and evaluated.*
In the sites where strong CBM efforts led or proceeded in parallel with MCS, resulting in increased local awareness of the importance of sustainable fishing, illegal fishing activities were significantly reduced.

Conversely, in those sites where CBM activities lagged MCS efforts, there was a much lower level of community awareness and commitment to the primary objectives of COREMAP, and a significantly smaller reduction in illegal fishing, even where reef watchers had been well trained and equipped (e.g., at Bromsi in the Biak district).

In designing MCS, the Bank and subsequently the Technical Assistance (TA) consultants over-estimated the external threats to the reefs in the pilot sites without realizing that a large proportion of the destructive practices and threats to reefs were caused by local fishers. As a result, this component procured equipment in greater amounts and complexity than was necessary, and operation and maintenance costs were not sustainable. Had the design of the MCS component not been finalized until working relationships had been established with communities through CBM, more complete information on the type of threats to the reefs would have been available. Unfortunately, MCS also turned out to be an easier component to implement than CBM and ran ahead of it, thus contributing to local citizens' initial perception of COREMAP as "policing" rather than "supporting" them. The Independent Evaluation observed that the CBM-first sequencing of the ADB-supported COREMAP project in Riau Province avoided such a perception of MCS. AusAID in its COREMAP at Kabupaten Sikka de-emphasized MCS even further. Nevertheless, the Bank-supported MCS component made a measurable difference in enforcement effort and outcomes and in the levels of illegal activity at both sites. It achieved the defined triggers for proceeding to Phase II, and it served its purpose as a pilot; the design of COREMAP II has benefited from the lessons learned. This justifies a satisfactory rating.

Community-Based Management (US\$2,000,000) – Satisfactory

- *Pilot community-based management plans in two sites designed and tested*

The two pilots and (consequently) this component have been satisfactorily implemented, establishing the framework for COREMAP II to develop potentially sustainable, cooperative or "co-management" partnerships (see 6.1 below) between communities and local governments. The experience with CBM makes it clear that a two-to-three year timeframe for fully developing a CBM program from zero in a given locality is unrealistically short. More time is needed, and project teams need to avoid creating expectations of quick realization of benefits in the participating communities.

4.3 Net Present Value/Economic rate of return:

At the time of Appraisal, a Net Present Value (NPV) and Economic Rate of Return (ERR) were calculated for the two pilot sites in COREMAP I but not for the national-level activities. One of the pilot sites was subsequently relocated, so the calculation for Taka Bone Rate is taken here as representative of the potential of the Phase I Program: an NPV estimated at US\$ 5.0 million, with an ERR of 14 percent. A new NPV was not calculated for COREMAP I because it is still too early to measure the changes in reef fish yields and decreasing coral destruction that would provide the basis for the calculation.

4.4 Financial rate of return:

A Financial Rate of Return (FRR) was estimated at appraisal for micro-enterprise activities (i.e., alternative livelihood to reef fishing and extraction) that would be supported by seed funds (i.e., micro-credit) available to participating villages in the two pilot sites. For a hypothetical package assumed to comprise 50 enterprises with 387 investors using US\$35,000 in micro-credit, the estimated FRR in the PAD was 39 percent. In Taka Bone Rate, COREMAP I was successful in distributing a total of Rp. 196,132,500 (roughly US\$21,500 at current exchange rates) in three tranches. By the end of January 2002, the rate of return reached 63 percent, with the seed funds having been revolved at least once and the number of community groups borrowing having increased from 32 to 54. By the end of July 2004, the funds had revolved up to Rp. 316,000,000 for 90 community groups (roughly US\$35,000 at current exchange rates). The seed funds were used to support activities such as fishermen's kiosks (small shops selling fishing supplies), seaweed culture, handicrafts, purchase of *rumpons* (fish aggregating devices), markers for sanctuaries, and coral reef information centers.

4.5 Institutional development impact:

According to the OED PPAR, the institutional development impact of COREMAP Phase I was **substantial**. The program backed the government's decision to designate the newly-created MMAF as the agency responsible for management of coral reef resources, where there had been none before. It supported the MMAF in establishing a Directorate General for Coasts and Small Islands which was directly responsible for coral reef ecosystems (and for preparation of COREMAP II), and in training many of the staff that would work in this new Directorate. Phase I also created and adjusted as necessary the entire institutional framework needed to implement the program, including the national PMO, the district Pokjas, and the village community groups. There are still areas for improvement, and there is a risk that some of the capacity will be lost in the transitions from LIPI to MMAF and from Phase I to Phase II. However, this architecture is consistent with the institutional decentralization strategy of the Government of Indonesia, replicable as COREMAP expands, and adaptable to local customs and circumstances. It constitutes a major achievement.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

COREMAP is noteworthy as one Bank-supported program that was not strongly affected by the economic crisis that beset Indonesia in 1997. Other external factors did strongly affect the program.

The political situation over the course of Phase I led to several changes in pilot sites and delays in field programs. Serious ethnic conflict in Maluku made it impossible to implement planned CBM and MCS activities in the Lease Islands. When it was no longer possible to wait for the situation to improve (and it still has not), the Padaido Islands in Biak were substituted as the second pilot CBM site. MCS had already started in Biak, and there was already an NGO working there on CBM. COREMAP CBM activities did not begin there until 2002, after that same NGO agreed to augment its program with COREMAP funding assistance.

AusAID was also compelled to shift its CBM pilot site in East Nusa Tenggara from Kupang to Maumere in Sikka District because of civil unrest associated with the independence of East Timor.

Suboptimal coordination with other donors upon which the project relied. COREMAP benefited from the involvement of three donors -- the Bank, ADB and AusAID -- and the differences in their approaches to CBM and MCS at the field locations. The richness of this experience has been an asset in the design of COREMAP II. However, some activities were not well integrated at the community level, and part of the reason was the funding by donors of separate components and employment of different technical assistance teams, which did not themselves coordinate very well. This had some unfortunate outcomes. For example, the OED Evaluation found that there was no correlation between the marine reserves identified in the coral reef management plans in Taka Bone Rate (financed by the Bank) and the areas where LIPI conducted coral reef health surveys and monitoring (financed by the ADB), making it difficult to establish a baseline and determine the impact of COREMAP activities on the reef health. This is a significant shortcoming of COREMAP I that is being remedied in the design of COREMAP II by making one donor responsible for the full program in a given location.

5.2 Factors generally subject to government control:

In 1999 MMAF was created and became the natural institutional home for the long-term COREMAP Program. The debate on how and when to shift COREMAP occupied nearly a year and distracted many individuals and agencies. A number of COREMAP PMO members also took management positions in the new ministry.

The Autonomy Law was passed in 1999, giving more authority to district governments to manage local programs. When COREMAP I was designed, much of the authority to manage local programs rested at the central and provincial levels, and the project was managed from Jakarta with councils established at each province. However, under the new Autonomy Law the authority largely shifted to the district level so that decisions

concerning the implementation of COREMAP I were now that much farther removed from the level of government responsible for the program. COREMAP had to make significant adjustments that caused delays in Phase I but allowed the design of the much more decentralized Phase II to begin on a stronger footing.

Initial delays were also partly the result of an unrealistic design expectation that the capacity existed at inception to manage this program. Until 2001, there was no full-time director in the PMO for COREMAP I and a lack of staff, even at senior levels, committed full-time to implementing the project. Considerable progress was made to remedy this constraint with the appointment of a full-time director and four part-time Assistant Directors for the components. However, the practice of appointing government staff on a part-time basis to work on the project at all levels remained a serious constraint. Remuneration levels were unattractive and staff could lose promotion opportunities if they were posted to a program outside their home department. In addition there were frequent staff transfers.

5.3 Factors generally subject to implementing agency control:

The PMO was not always able to integrate the different program components and pilot locations. Consolidated progress reports were not produced until the PMO appointed a full-time international management advisor and a full-time national monitoring specialist, as recommended in the Mid-Term Review (MTR), at the end of 2001. Even with those appointments, the lack of integration among the different program components and donors and the difficulties of coordinating a program with other levels of government and distant sites remained problems until completion.

Proposed CBM activities did not always receive adequate technical review. The selection of some of the marine reserves designated in the coral reef management plans in Taka Bone Rate was not technically sound in that several reef sanctuaries are in areas where the coral is already destroyed. Electric generating systems financed in three villages in Taka Bone Rate had defects in design and financial management; these defects were corrected during the final extension period.

5.4 Costs and financing:

The total cost of COREMAP I exceeded the appraisal estimate of \$12.8 million by \$530,000. Virtually all of the excess is accounted for by higher costs in the Program Strategy and Management component, all of which were borne by the Borrower. Within the loan and grant, there was a net reallocation from Program Strategy and Management to MCS and CBM, with Public Awareness nearly as originally estimated. Disbursement delays resulted from the factors described in 5.1, 5.2 and 5.3 above and, in addition, unrealistic expectations in the Bank team and PMO about the rapidity with which CBM programs could be put in place with NGO facilitation and full participation by local stakeholders. The major negative outcome of the delays was frustration at the community level. On the positive side, the Bank and GEF funds were sufficient to cover the project through the three extensions that were necessary to continue activities until preparations for COREMAP II were completed, and there was never a shortage of counterpart funds from the Borrower.

6. Sustainability

6.1 Rationale for sustainability rating:

The sustainability of the achievements and activities begun under COREMAP I is rated as **likely**. The reef management interventions supported in the two pilot sites, while not necessarily sustainable on their own without further support, will be expanded upon in Phase II over a period of six years, building on the relatively strong *Pokja* in each district. A very encouraging sign of potential sustainability in Taka Bone Rate is the practice of taking a small amount of interest on repaid seed funds to finance protection of the “no-take” zones, through purchase of boundary markers in one case, and payment of reef watcher expenses. In both COREMAP I sites, as well as four other sites throughout eastern Indonesia, Phase II aims to take the model of “community-based management” forward, moving from communities managing the resources alone as part of a component-oriented program to a more process-oriented approach for establishing cooperative, or “co-management” partnerships between the district government and the local communities.

The MCS operations to support such coral reef co-management in the two pilot sites are not sustainable as designed, primarily because of the high operating cost, but steps are being taken to make them sustainable. Phase II will support only a scaled-down version of these operations at both existing and new sites. Ownership of all surveillance and enforcement equipment procured under COREMAP Phase I has been transferred from LIPI to MMAF; it includes eight speed boats, two large patrol vessels, computers, software and radio and radar equipment, for a total value of approximately US\$1.75 million. The transfer was effected through a Ministerial Decree entitled “Berita Acara Serah Terima Barang Milik/Kekayaan Negara COREMAP Phase I from LIPI to DKP”. (No. 3958a/K/LK/2004) dated July 13, 2004. MMAF will work out arrangements for scaled-down, sustainable operations in partnership with local government, with cost-sharing, implemented through Memoranda of Understanding (MOU). In both Biak and Selayar, these MOUs (and budget arrangements) should be in place by the time of loan effectiveness for COREMAP II.

Although MMAF will take responsibility for public awareness in COREMAP II, LIPI will continue to lead the educational elements of that component. During the interval between the two phases, LIPI is continuing developing and distributing COREMAP educational materials to schools – a strong indication of sustainability for the public awareness component of COREMAP I.

6.2 Transition arrangement to regular operations:

The transition to regular operations will continue during COREMAP II, which became effective on January 28, 2005. In terms of the transition from Phase I to Phase II, the institutional structures for management of the program have already been established, with a National Coordination Unit based at MMAF that includes representatives of LIPI from the Phase I PMO. Similarly, based on preparations sponsored during Phase I, the local governments in each of the six districts established Phase II preparation teams that would form the basis for the Program Management Units that will function as a PMO in each district. Furthermore, in Phase II the Bank will sponsor all activities forming the coral reef co-management process in these six geographic areas in eastern Indonesia while the ADB will do the same in western Indonesia, rather than breaking the process down into individual components financed by separate donors. This Phase II Program reflects the lessons learned from COREMAP I (see section 8) as well as a more decentralized management and implementation structure compatible with the 1999 Regional Autonomy Law (see section 5.2). The key outstanding issues in the transition from Phase I to Phase II remain the sustainability of the MCS operations in the districts of Biak and Selayar (see section 6.1), and the continued facilitation and dialogue with communities and stakeholders in these areas so that they understand the gap in time between completion of Phase I and the effectiveness of Phase II.

7. Bank and Borrower Performance

Bank

7.1 Lending:

The Bank's performance during project preparation and appraisal is considered to have been *Satisfactory*. Program identification was solidly grounded on then-emerging international best practices in establishing marine protected areas (MPAs) and on the IUCN/World Bank Representative System of MPAs, as well as on emerging experience with Natural Resource Management (NRM) systems in Indonesia. The Indonesia Biodiversity Action Plan (1993) and Indonesia's Agenda 21 (1996) emphasize community-based marine resources management. As mentioned in section 3.1, the project's objectives were consistent with then-current CAS objectives, which gave high priority to sustainable resource management. The focus on policy and legal reform, strengthened enforcement, creating demand for good governance at the local level, and close collaboration with other donors and NGOs are supportive of the present CAS. In addition, the project is also consistent with the three broad objectives of the Bank's Environment Strategy that was under development during COREMAP's implementation: (i) improving people's quality of life, (ii) improving the prospects for and quality of growth, and (iii) protecting the quality of the regional and global environmental commons. Finally, the project is consistent with the GEF's Operational Strategy, in particular the Operational Program on Marine, Coastal and Freshwater Ecosystems.

In addition to the staffing of all four preparation missions with knowledgeable experts from Headquarters and the resident mission in relevant technical areas plus financial management and procurement, the Bank fielded consultants expert in environmental economics, policy and strategy development, community-based marine resource management, micro-enterprise management, coastal zone management, conflict resolution, law and law enforcement in marine fisheries and protected areas. The design was informed by an unusually extensive economic cost-benefit analysis that is still considered a landmark in the field of coral reef management and by comprehensive social analysis at the site level. When the APL emerged as a new instrument in 1997, the preparation team recognized its appropriateness for this operation and assisted the Borrower in reformulating its program documents. COREMAP was the third APL presented for Board approval. During pre-appraisal, senior consultants in coastal zone management and enforcement provided extensive, hands-on assistance to the relatively inexperienced Borrower's team in drafting the project implementation plan. The delay of more than one year after the planned appraisal date can be attributed to: (i) the newness and complexity of the project, (ii) the relative inexperience of the executing agency in working with the Bank, (iii) a hiatus after a proposal by the Government to expand the program to 10 provinces at the outset, to which the donors did not agree, and (iv) the mid-course conversion to the APL format. Coordination with ADB and AusAID was generally good.

All relevant technical specialties plus procurement and disbursement were represented in the nine-person appraisal team. Borrower commitment continued to be strong, even when the unfolding economic crisis in Indonesia could have provided justification for not proceeding with a conservation project. Safeguards were correctly complied with. The highest environmental risk was determined to be adverse impacts of unrelated developments in the vicinity of the pilot sites (notably a proposal for an oil refinery at Selayar, which was subsequently dropped), and the arrangements included in the design to respond to this risk proved to be both necessary and effective. The financial package was adequate, and the APL has proven to be the appropriate lending instrument. The project design was unusually complex, as it needed to be to organize and empower widely dispersed and remote island communities in the absence of supportive legal, policy and institutional frameworks. Risks were adequately identified; the significant changes in security and government structure that materialized later could not have been foreseen at appraisal. The possibility that a ministry would be established to handle marine resources was known and taken into account in project preparation, whereas the fact that its creation would have some adverse impacts on COREMAP in the short term was counter-intuitive and thus not predicted.

The time needed to establish the guidelines, organizational structures, and local ownership of the program needed for effective community-based coral reef management was greatly underestimated. There was strong political interest in a quick first phase followed by expansion to 10 provinces. However, three years was simply not sufficient to "pilot" community-based management in Taka Bone Rate, and this was the principal reason for two of the three extensions of the Loan and Grant Closing Dates. It was also a source of frustration at the village level; residents had been hearing about the potential benefits of COREMAP since as early as the preparatory stage in 1995, but the first seed funds were not disbursed until 2000.

7.2 Supervision:

The Bank's performance during supervision is considered to have been *Satisfactory*. The Bank conducted a Launch Workshop, a MTR and ten formal supervision missions. Three key team members, the financial management specialist, procurement specialist, and co-Task Team Leader (TTL), were based in the Jakarta resident mission and interacted frequently with PMO, LIPI and BAPPENAS during intervals between supervision missions. The Launch, MTR and four of the 10 supervision missions were conducted jointly with the ADB. AusAID joined three missions and was invited to all kick-off and wrap-up meetings and copied on aide memoires. The official ICR mission took place in the month immediately following Loan closing. Typically the mission teams consisted of five staff and consultants – the TTL and/or co-TTL (who were specialists in coastal zone management and environmental management, respectively) and experts in CBM, MCS, and financial management, with other specialties such as natural resource economics, public awareness, fisheries and decentralization joining as needed. The procurement specialist interacted more frequently with the PMO. Continuity of supervisory personnel was excellent: the original TTL continued with the project until mid-2001, at which time the co-TTL, who had been a team member since pre-appraisal, took over and remained through ICR preparation. The MCS consultant, financial management specialist and disbursement specialist were the same

individuals throughout. A natural resource economist who joined the team as CBM specialist in 2001 is now TTL for COREMAP II, ensuring good transfer of experience to the program's second phase.

In the PPAR, OED observed that this was an extraordinarily challenging project to supervise. Aside from an intricate design involving policy reform and institutional capacity strengthening at different levels, and community development in two remote and dispersed project sites, the creation of the MMAF in 1999 (see section 5.2) led to the transfer of several of the project's best staff from the PMO to the new agency and a period of uncertainty regarding the extent and time of COREMAP management transition from LIPI to MMAF. While this was a logical development that would help the program in the long term, the uncertainties surrounding the fate and ownership of the program and the shortage of staff contributed to delays in project implementation. The lack of progress was vigorously pursued by the supervision team and was recorded in the Project Status Reports (PSRs) with a series of unsatisfactory project ratings until the problem was resolved. Unsatisfactory ratings for project management were given in the PSR of May 17, 2000 and the MTR on December 28, 2000, and for implementation in the May 17, 2000 PSR. Unsatisfactory ratings were also given for legal covenants in the PSR on May 17, 2000 and July 14, 2001, and the MCS component received an unsatisfactory rating in the May 17, 2000 PSR and the December 20, 2001 PSR. Lastly, the CBM component received an unsatisfactory rating at the MTR. In retrospect, supervision should have been more aggressive in enforcing compliance with the legal covenant requiring BAPPENAS to assign and maintain a full-time PMO director and deputy director from the beginning and in demanding (in concert with ADB) consolidated progress reports covering all components and incorporating results from the sites.

Regarding safeguards, a private sector proposal in March 1999 to locate an oil refinery at Selayar caused the Bank to invoke the provision in the Loan and Grant Agreements that Government approval would not be given until a proper environmental assessment had been carried out and had shown that any adverse impacts on COREMAP sites could be satisfactorily limited. The proposal was dropped in May 2001. The project's compliance with the Bank's safeguard policies had been otherwise uneventful from the time of appraisal until the 7th supervision mission, when the mission learned of the resettlement of 12 families living on an island in Taka Bone Rate that was designated as a no-take marine reserve by the National Parks Department in 1998. Though the resettlement had not been carried out through COREMAP and the Bank's OD 4.30 on Involuntary Resettlement had thus not been violated, the team followed up to ensure that the Government of Indonesia had taken the necessary actions to restore their living conditions at least to pre-resettlement levels and to facilitate their benefiting from COREMAP's community development aspects. A spot check by the PPAR team during the 9th supervision mission in September 2003 found that the resettled families had not yet benefited from the CBM program and that their living conditions were below average for the area. Further follow-up during the ICR mission confirmed that the resettlers received a special Seed Fund allocation of Rp. 20 million during the final extension period of COREMAP I, which was used to finance a fishing equipment kiosk operated by a women's group and nets for two fishing groups.

7.3 Overall Bank performance:

The Bank's overall performance is considered to have been *Satisfactory*. This rating balances QAG's recognition for quality at entry with this ICR's retrospective review of preparation and appraisal, and takes into account that supervision was generally effective in promoting progress toward and achievement of development objectives despite unforeseen and frequently challenging circumstances.

Borrower

7.4 Preparation:

The Borrower's performance during project preparation and appraisal is considered to have been *Satisfactory*. The Government of Indonesia, specifically BAPPENAS, committed in the mid-1990s to a community-based coral reef management strategy and steadfastly supported this concept. BAPPENAS and LIPI were heavily involved in design beginning with the initial concepts. When the opportunity arose to recast the program to permit the Bank to utilize its new APL instrument, BAPPENAS readily took advantage of it, preparing necessary documentation in short order. Government funding enabled preparatory activities in all potential COREMAP locations and solid staff support to Bank preparation missions. LIPI staff carried out and documented extensive environmental and socioeconomic baseline surveys at the pilot sites proposed for community-based management activities. The implementation arrangements promoted by BAPPENAS were somewhat risky since they centered on LIPI, a

scientific institute with limited field presence and little community orientation, and depended on a high-level committee for the necessary interagency coordination. There was no better alternative for executing agency, and what LIPI lacked in experience and implementation authority it partially made up for in strong commitment to the program. On the other hand, the concept of a coordinating committee proved ineffective from the beginning.

7.5 Government implementation performance:

The Borrower's performance during project implementation is considered to have been *Satisfactory*. Particularly noteworthy were: the dedication of LIPI personnel and a number of the PMO members from other agencies (MMAF, Home Affairs, Navy); high-level policy statements (presidential and ministerial) emphasizing the importance of Indonesia's coral reefs and other marine resources; and the unwavering commitment of the Government to execution of the project, best demonstrated by reliable provision of counterpart funds even during times of economic and political upheaval. There were nevertheless problems in the first half of the project. The Government's delay in appointing a qualified, full-time PMO director placed an undue burden on the PMO Secretariat and had a significant negative effect on decision-making, coordination among components, management of and coordination between technical assistance consultants funded by the Bank and ADB, progress monitoring and reporting, and communication with working groups at provincial and district level. The interagency Advisory Committee set up for COREMAP did not meet more than twice in the initial three years of COREMAP and consequently did not fulfill any useful function. The leadership problem was corrected in the second half of CY2001 when a senior LIPI staff member was appointed as full-time PMO director. Interagency coordination also improved after BAPPENAS established two new bodies – a Steering Committee, with members at the Director-General (DG) level and a Technical Committee.

7.6 Implementing Agency:

The overall performance of the implementing agency is considered to have been *Satisfactory*. Initially unfamiliar with Bank procurement and disbursement procedures, the Project Manager (PIMPRO) and his team quickly obtained a full working knowledge to such an extent that in subsequent Bank procurement training COREMAP's financial management staff functioned more as resource persons than trainees. Their record-keeping and reporting were exemplary, and they were diligent and dedicated in their management efforts, working long hours and going beyond their administrative responsibilities in efforts to keep the program on schedule. All financial audit reports were received on time and with an unqualified audit opinion. No serious matters were raised or brought to the attention of project management by the auditors. Ironically, the team's good performance had one unintended consequence: in the partial vacuum in technical leadership described in section 7.5 above, their effectiveness led to some complaints from provinces and districts that too many decisions were driven by financial rather than operational considerations.

Particular recognition is warranted for LIPI's execution of the PA component and to the guidelines developed and training provided on community-based coral reef management, in which staff seconded to the PMO from DG Fisheries played the key role. LIPI also succeeded in the difficult task of maintaining effective working relationships with the district governments in Selayar and Biak, the roles of which changed dramatically after decentralization in 2001.

Communications between the center (PMO) and the provinces and districts were difficult throughout much of the project, with the field offices complaining that they were not being kept informed or consulted on decisions affecting them and the PMO not being able to obtain routine progress reports from the field that could be consolidated for presentation. These conditions were alleviated in late 2001 when the PMO director obtained the services of an international advisor in project management and a national expert in monitoring. That the problem was solved in that way further confirms that the initial part-time staffing of PMO was suboptimal. It also provides evidence for two problems overlooked in setting up the PMO and writing the terms of reference for PMO's technical assistance consultants: the PMO was not adequately staffed for technical project management (in contrast to financial management), and the various consulting teams did not fill that staffing gap or work together in monitoring and reporting on the progress of the various components in any integrated way.

7.7 Overall Borrower performance:

The Borrower's overall performance is considered to have been *Satisfactory*. This rating balances QAG's recognition for quality at entry with this ICR's retrospective review of preparation and implementation. There were several shortcomings in implementation that the Borrower could have avoided but, as confirmed by the Independent Evaluation conducted by IUCN, COREMAP I achieved sufficient success to justify proceeding to the second phase of the APL.

8. Lessons Learned

COREMAP I provided the lessons described below concerning managing and protecting coral reef ecosystems and fisheries. All have been applied in the design of COREMAP II.

- **Projects should adopt a broad ecosystem-based approach in addressing coral reef conservation, focusing on fisheries:** According to the Independent Evaluation, COREMAP II will need to focus more on the fish, recognizing that the fisheries the reefs support are the most important service they provide to many coastal residents and that overfishing is one of the greatest threats to the reef ecosystems.
- **Communities should be the focus of coral reef ecosystem and fisheries management activities:** Coral reef ecosystem and fisheries management can only be sustained at the village level if communities are to benefit from reef management responsibilities. Enforcement measures alone cannot work. For this reason, the Evaluation suggested that developing community support should be the first objective in new sites and a balance achieved between activities aimed purely at reef and related ecosystem conservation and those targeted on improving the quality of life within the community. Other activities, MCS in particular, should be scheduled and implemented accordingly, even when that means deliberately slowing their progress to allow the community work to remain in the lead.
- **Coral reef ecosystem and fisheries management is a time-consuming process of consensus-building among resource users and stakeholders:** Processes employed in COREMAP I to mobilize communities and to introduce community-based management were generally effective. Particularly successful elements of community-based and collaborative management activities in Riau and Taka Bone Rate included the formation of community groups and democratic selection of Village Motivators, community-based village profiling and data gathering (i.e., Reef Check, history transects, etc.) and the selection of a fully-protected marine reserve. The most successful activities were those that were part of a larger process of engaging the communities rather than independent and isolated components. This is time-consuming work, and that needs to be taken into account in project implementation planning and scheduling.
- **Coral reef ecosystem and fisheries management will benefit from decentralization:** The locus of management should be moved to the local level, with decisions made as close to specific locations as feasible. The capability of the district governments to take on more management responsibilities was demonstrated in COREMAP I, as was the fact that centralized control of such as program is ultimately not likely to succeed.
- **However, communities and local government need central government or other external partners to manage coral reef ecosystems and fisheries:** Even with strong community support, coral reef protection in these pilot sites in Indonesia was not and will not be completely successful unless there is a strong and supportive legal and enforcement regime (e.g., a supportive legal regime at the national level and an enforcement regime at the provincial level that can support and assist the district government as needed). In addition, the Independent Evaluation recommended that more resources should be provided in the second phase for the recruitment of external expertise to assess the feasibility of Alternative Income Generation (AIG) possibilities. The viable AIG possibilities and the risks involved could be developed into a portfolio of options that would be presented to communities, as well as training and assistance to develop the AIGs.

- **Coral reef MCS and enforcement measures must be cost-effective and sustainable.** MCS activities in coral reef ecosystems should aim to minimize project costs and complexity in order to carry out only those activities that are seen to have direct bearing on achieving project objectives. MCS activities should also be designed with a long-term funding plan or source for the operating costs of MCS systems after the completion of the project. Likewise for monitoring, excessive collection of non-essential coral reef data leads to wasted resources and a loss of enthusiasm and accuracy by data collectors.
- **In dealing with diverse and dynamic communities, flexibility must be incorporated into the design of all coral reef ecosystem and fisheries management activities:** The Evaluation recommended that Phase II should allow considerable flexibility in tailoring programs to the very diverse cultural, socioeconomic and biophysical conditions at different localities in Indonesia. More specifically, the Evaluation recommended that the design focus on definable outcomes rather than on rigid output criteria that prevent a flexible response. Allowing the communities to determine program targets that are realistic is often more appropriate than setting artificial targets which, though measurable, do not yield meaningful benefits to the community. For example, in Phase I stakeholder signatory statements were required acknowledging acceptance of the COREMAP program but in many cases these statements resulted in polarizing the community into two factions (adherents and non-adherents).
- **Fully-protected marine reserves should be selected based on some fisheries criteria:** In both Riau and Taka Bone Rate, reserves were often selected on the basis that these areas were not heavily fished. While such a strategy is convenient and avoids conflict with fishers, the coral reefs in areas may be less rich than heavily fished areas and therefore less important for rejuvenating and supplying the fisheries. Therefore, some reserves should be established in areas in which there are high populations of commercially important species or which are deemed important according to other criteria that would ensure that protected breeding grounds are set aside for these species.
- **Marine protected areas require long-term funding and institutional commitments from both donors and governments:** This is best achieved with a program and funding that have an adaptable time horizon of 10 or more years.
- **It is vital to incorporate specific provisions for coordination among components:** Coordination needs to happen at central and site levels, among donors and project teams, and it also needs to be a contractual requirement in TA consultant contracts.
- **It is important to begin working early with a borrower on the preparation for the next APL phase, most likely from the time of the mid-term review, in order to avoid financing gaps and ensure continuity between phases:** This is important for any APL but critically so for one such as COREMAP, in which even temporary interruptions of support to local communities and NGOs can slow or reverse progress toward development objectives.
- **Project designs should provide for information exchange within the relevant scientific and development agency communities:** While COREMAP's public awareness campaign was highly satisfactory, there was no explicit requirement or budget for presentations at international conferences, monitoring results of similar programs in country and region (e.g., USAID's path-breaking work at Bunaken National Marine Park), or informing other practitioners of COREMAP progress. Information exchange would have been mutually beneficial.

9. Partner Comments

(a) Borrower/implementing agency:

Overall comments received from the implementing agency (LIPI) (for more detail see Annex 10):

COREMAP is an Indonesian Program for coral reefs, co-financed by the World Bank, Asian Development Bank and AusAID, and executed in several provinces/districts. The different characteristics and administrative procedures of the various donors made the management of the Program extremely difficult, and in order to achieve

satisfactory results, strong cooperation was needed from all partners. Some of the key lessons derived from this experience of executing COREMAP I include:

- COREMAP I was originally designed for three years. Three years is too short a period of time to obtain adequate experience in building a sound management model for coral reefs, particularly in this case, as the Program had to start from a very low level (in terms of human resources, technology, experience, awareness). the result was several extensions of Phase I.
- Drastic changes in the political situation in Indonesia occurring during COREMAP I had significant impacts on the program that were not anticipated. The issuance of the Autonomy Law decentralized much of the authority previously held by Central Government, and the changes in government structure, creation of a new Department of Marine and Fisheries, are some of the more obvious examples.
- Security problems were also not envisaged during preparation, for example in the case of Maluku. The decision to relocate the Program's CBM (community-based management) activities from Maluku to Biak took a long time, and the situation in the new site was quite different. The limited time remaining for implementation of these activities in Biak did not give optimal results.
- Assumptions adopted during the design of the program could not be met in the real world. The application of high technology for MCS (Monitoring Control Surveillance) in areas where technical support and human resources were very poor was not appropriate and very costly, and will affect the sustainability of these activities.
- Administrative preparation for COREMAP II has been lengthy, so that when COREMAP I was terminated, it could not directly enter COREMAP II. A long lapse of time without field operation in the original sites will lessen the impetus in restarting the program.

(b) Cofinanciers:

Comments were also received from AusAID:

COREMAP Phase I created a solid foundation for sustainable coral reef management in the pilot sites, particularly in the AusAID-funded site of Maumere Bay in Sikka. The Program has not only improved coral reef management but also governance in the broader sense of the term, as the participatory approach that was used has been applied to other areas of planning and management, enhancing and encouraging transparency and accountability. While it remains to be seen to what extent the benefits of the Program will be sustained, solid community support, continuing commitment from the district government, and further donor support through COREMAP Phase II have been encouraging signs to date. A positive, but likely less measurable, outcome is the increased confidence of local participants to continue with COREMAP-supported activities beyond the life of the Program.

(c) Other partners (NGOs/private sector):

N/A

10. Additional Information

Space does not permit repetition of items of interest to GEF that are discussed elsewhere in this report. Cross-references are provided for the convenience of GEF reviewers.

(a) Implementation Approach.

- Use of logical framework: see 4.1 on Key Performance Indicators and Annex 1 for the Framework.
- Effective partnership arrangements were established with NGOs and local governments at the pilot sites. See 5.1 for relations with co-financiers.
- Lessons from other projects: besides the body of knowledge mentioned in 3.1, the series of Kecamatan Development Projects in Indonesia (P072355, P073025, P079156) provided valuable lessons used in improving the implementation arrangements for CBM.
- Feedback from monitoring and evaluation (M&E) activities was used for adaptive management; the most obvious cases were the feedback from the MTR and the findings of the Independent Assessment.

(b) Country Ownership/Driveness.

See 3.1, 4.1 (Key Performance Indicator 1), 4.5, 5.1 5.2, 7.1 and 7.5 for evidence of the strong country ownership and commitment.

(c) Public Involvement.

- Information Dissemination: see discussion and evaluation of award-winning public awareness component in 4.2.
- Consultation: NGOs and community groups are integral to CBM. Academic institutions, NGOs and other stakeholders were engaged in the project in other ways, such as consultations on and indeed formulation of the national policy and strategy, marine park zonation in Taka Bone Rate, and the Independent Evaluation.
- Stakeholder Participation: The successful models for CBM depended entirely on local decision-making structures, local knowledge and community involvement. See 4.1 Performance Indicator 4.

(d) Replication approach.

In terms of replication within Indonesia, the lessons learned (see 8.0) have been incorporated in the design of COREMAP II which is a scaling-up to other pilot areas including the site originally funded by AusAID (which because of changed priorities is no longer financing coral reef conservation), as well as continuation in the two existing sites. Similarly, ADB is also scaling-up its COREMAP involvement.

However, in terms of replication in other countries, COREMAP I did not include a budget dedicated to international awareness-raising and publication of results (although COREMAP II does). Despite this, the lessons learned from COREMAP I and many of the results have been featured in the recent Bank publication “Saving Fish and Fishers: Towards Sustainable and Equitable Governance of the Global Fishing Sector” published in 2004. This paper established the Bank’s recommended approach to support for fisheries-related projects, as guidance to both Bank staff and borrowing countries. In several cases in Africa, new Bank-supported fisheries management projects have adopted some of the approaches and lessons learned from COREMAP I, particularly the recently-approved Integrated Marine and Coastal Resources Management Project (GIRMaC) in Senegal which focuses on co-management of small-scale fisheries. Many of the evaluations of COREMAP I were reviewed and their results incorporated into the design of the GIRMaC. Lastly, LIPI also published an internationally-received book on the lessons learned from COREMAP I.

(e) Financial Planning.

Annex 2 provides most of the financial details, but the table requested by GEF is included as Annex 11. See 4.1, 4.2, 5.4, 7.5 for discussion of financial management.

(f) Cost-effectiveness.

According to the PAD, US\$4.1 million in GEF funds were allocated to cover the incremental costs associated with the four main components, essentially to ensure protection of globally significant coral reef biodiversity. These costs included:

- US\$1.2 million for community-based management activities, in order to provide the global benefit of “protection of globally significant biodiversity”;
- US\$0.9 million for surveillance and enforcement activities to provide the global benefit of “ensuring better protection and management of globally significant sites”, including reducing destructive fishing practices;

- US\$1.2 million for public awareness activities to provide the global benefit of “increasing international and national pressure to stop mobile threats such as cyanide fishing”, as well as to increase exchange of regional lessons of experience and create a strengthened public constituency to protect “the world's richest coral reefs”; and
- US\$0.8 million for program strategy and management activities to provide the global benefit of a strengthened focus on high-priority conservation sites and enhanced capacity of NGOS.

In actuality:

- Over US\$0.6 million was spent on CBM activities, which did assist in the realization of the global benefit of coral reef biodiversity protection in Taka Bone Rate (see Section 4.1);
- Over US\$0.65 million was spent on surveillance and enforcement, with the global benefits largely achieved (see Section 4.1);
- Over US\$1.1 million was spent on public awareness activities, with the global benefits partially achieved in the sense that a much stronger public constituency for the protection of Indonesia's coral reefs was created within the country at national and site levels (see Section 4.2). Limited international awareness was created, for reasons discussed above in Section 10d; and
- About US\$1.75 million was spent on program strategy and management, consultant services and workshops within various components, with the global benefit achieved in that this work in COREMAP I led to the selection of some of the highest priority sites (e.g., Wakatobi National Park, Raja Ampat) for globally significant biodiversity to be included in COREMAP II. In terms of capacity-building of NGOs, this was realized only for those local NGOs participating in the pilot sites.

Thus, the GEF funds were largely spent on the incremental costs as envisaged by the PAD, with a majority of the global benefits realized. In some ways - delays in disbursement, for instance - the grants were not necessarily as cost-effective as they could have been, for the same reasons the entire project faced difficulties (see Sections 5.1, 5.2 and 5.3). Similarly, as described in Section 4.2, the MCS equipment procured for surveillance was more complex and expensive than necessary patrol the reefs effectively. These problems have been addressed in the design of COREMAP II, which is a decentralized program that focuses on low-cost and community-based MCS systems to ensure that the GEF funds will be delivered as cost-effectively as possible.

(g) Monitoring and Evaluation.

The initial monitoring plan was over-optimistic in its expectation that adequate baseline data on phenomena such as fishing violations would be obtained within Phase I. Moreover, it did not give prominence to data on fishing results at the pilot sites or ensure collection of baseline data on community reef sanctuaries, hence missing what turned out to be important sets of indicators. It was otherwise satisfactory. The inclusion of an independent evaluation was innovative and proved highly valuable.

- Effectiveness of implementation was reduced by: (i) the disconnect between the ADB-funded reef monitoring component and the Bank's CBM pilots (see 5.1); and (ii) operational problems with the information system for MCS that were never sufficiently resolved to allow consistent data collection and analysis. On the other hand, the Independent Evaluation was implemented with excellent effect.
- The indicators that were included were relevant and robust, and they were put to good use, particularly the triggers for Phase II and their application in the Independent Evaluation.
- The Independent Evaluation, the PPAR, and PMO's final report are of high quality.
- Lessons learned are reflected in the modifications to M&E made for COREMAP II. The COREMAP Program will be measured for achievement of three groups of outcomes, using: (i) management and empowerment indicators, (ii) biophysical indicators and (iii) socio-economic and poverty indicators (see the PAD for COREMAP II for a full description of the new indicators for Phase II). Similarly, in Phase II the reef health monitoring methodology will change to include a larger and more cost-effective sample size for each district which can be measured annually and which will be adjusted to ensure samples are taken from within new marine reserves as they are established.

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
COREMAP Program Strategy completed and discussed with key stakeholders. Ministerial letter issued recommending the implementation of the strategy to involved agencies. COREMAP II sites and design in accordance with the strategy. Institutional capacity evaluated as sufficiently improved to enable expansion of the COREMAP program	COREMAP strategy accepted by key stakeholders and guiding the design of COREMAP II. Sufficient trained and full-time staff to help expand the program to 10 provinces. Phase II provinces have the staff, skills, and capacity to expand.	COREMAP Strategy accepted by key stakeholders and guiding the design of COREMAP II. Ministerial decree issued, promulgating the strategy. Sufficient trained and full-time staff at MMAF to help expand the program to 10 provinces. Phase II provinces have the staff, skills, and capacity to expand, illustrated by participatory preparation of COREMAP II local implementation plans.
Compliance rates increasing by 10 percent in pilot sites, following introduction of MCS system Community-based management pilots evaluated as workable models, and lessons of experience incorporated into Phase II.	A tested, operational MCS system, linking community-based management with surveillance agencies. At least 1 valid pilot site. Lessons of experience incorporated into Phase II design.	50 percent reduction in number of violations per 100 patrols. At least 1 valid pilot site (TBR) with strong potential that Padaido will also be a valid pilot prior to closing. Lessons of experience have been incorporated into Phase II design.
75 percent of the outputs and disbursements reached. COREMAP I implemented satisfactorily.	75% of outputs and disbursements reached. COREMAP implemented satisfactorily during last FY.	More than 75% of outputs and 99% of disbursements reached. PSR ratings S for implementation during last FY.

Output Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
Matrix of draft legislation completed and submitted.	Draft legislation submitted. Guidelines on collection of evidence incorporated into MCS manuals. Community Management plans recognized.	Draft legislation submitted. Guidelines on collection of evidence incorporated into MCS manuals. Community Management plans recognized.
Qualified counterpart staff mobilized at the national and local levels, with sufficient equipment and facilities. TA, awareness firm, and qualified NGOs mobilized.	All teams local teams meeting at least 2/month.	TA, awareness and NGO-guided CBM components completed. Local teams prepared own implementation plans for COREMAP II.
Public awareness campaign completed.	30% of audience familiar with coral reef issues.	63% of general public and 71% of coastal community residents were aware of issues. Exposure to the campaign increased likelihood of recognizing seriousness of reef issues and increased fishermen's use of reef-friendly techniques.
Valid models of MCS tested and evaluated.	MCS units operational at national and 3 pilot sites; Monitoring in place; training of 195 orientation; 140 reef watchers; 80 enforcement officials.	Targets achieved. Frequency of illegal fishing practices measurably decreased, frequency and success rates of prosecutions substantially increased.
CBM pilots in two sites implemented.	Coral Reef Management plans for 2 sites accepted by local government. All motivators visited at least 1 other site. At least 1 group/village active on COREMAP program.	CBM in Taka Bone Rate proceeded through several rotations of revolving funds using seed funds and two disbursements of village grants. At Padaido, one increment of seed funds was disbursed.

¹ End of project

Annex 2. Project Costs and Financing

Project Cost by Component (in US\$ million equivalent)

Component	Appraisal Estimate US\$ million	Actual/Latest Estimate US\$ million	Percentage of Appraisal
Program Strategy and Management	2.90	3.25	112
Public Awareness	3.90	3.72	95
Surveillance and Enforcement	4.00	4.37	109
Community-Based Management	2.00	2.09	104
Total Baseline Cost	12.80	13.43	
Total Project Costs	12.80	13.43	
Total Financing Required	12.80	13.43	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US\$ million equivalent)

Expenditure Category	Procurement Method ¹			N.B.F.	Total Cost
	ICB	NCB	Other ²		
1. Works	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
2. Goods	2.10 (2.10)	0.00 (0.00)	0.00 (0.00)	0.10 (0.00)	2.20 (2.10)
3. Services	0.00 (0.00)	0.00 (0.00)	7.70 (7.60)	0.20 (0.00)	7.90 (7.60)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	1.50 (1.30)	1.20 (0.00)	2.70 (1.30)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	2.10 (2.10)	0.00 (0.00)	9.20 (8.90)	1.50 (0.00)	12.80 (11.00)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US\$ million equivalent)

Expenditure Category	Procurement Method ¹			N.B.F.	Total Cost
	ICB	NCB	Other ²		
1. Works	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
2. Goods	1.93 (1.93)	0.00 (0.00)	0.24 (0.24)	0.07 (0.00)	2.24 (2.17)
3. Services	0.00 (0.00)	0.00 (0.00)	7.35 (7.35)	0.21 (0.00)	7.56 (7.35)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	1.35 (1.35)	2.28 (0.00)	3.63 (1.35)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	1.93 (1.93)	0.00 (0.00)	8.94 (8.94)	2.56 (0.00)	13.43 (10.87)

^{1/} Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

^{2/} Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to: (i) managing the project, and (ii) re-lending project funds to local government units.

Project Financing by Component (in US\$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
Program Strategy and Management	1.00	1.10	0.80	0.65	1.77	0.82	65.0	160.9	102.5
Public Awareness	2.50	0.20	1.20	2.42	0.21	1.09	96.8	105.0	90.8
Surveillance and Enforcement	2.50	0.60	0.90	2.71	0.58	1.09	108.4	96.7	121.1
Community-Based Management	0.80	0.00	1.20	1.01	0.00	1.08	126.3	0.0	90.0

Annex 3. Economic Costs and Benefits

At appraisal, the NPV over a 25-year time horizon with a 10 percent discount rate was calculated for all COREMAP Phase I activities in the two pilot sites, which at the time were Taka Bone Rate in the district of Selayar and Lease Islands in the district of Maluku. No NPV or ERR was calculated for activities at the national level or for the Padaido Islands when the second pilot was moved there.

In the PAD, the NPV of the net incremental benefits for the pilot in Selayar was estimated at US\$5.0 million, with an ERR of 14 percent. These estimates were based largely on an expected recovery of reef fish yields as the result of the establishment of marine reserves and the elimination of destructive fishing practices in the district. In the standard “with project” scenario presented in the PAD, this estimate was based on incremental benefits of US\$13.5 million and a total of US\$5.5 million in project costs during Phase I (43 percent of the total project costs), and another US\$5.85 million in costs during Phases II and III.

This NPV and the ERR have not been re-estimated at the completion of Phase I because the long-term nature of the benefits means that it is too early to measure them. For example, while increasing fish yields account for a significant portion of the expected incremental benefits, many of the most valuable reef species (e.g., groupers) have relatively long life-cycles, so that the benefits of better management and stock protection would not necessarily translate into higher yields within the time period of Phase I. Similarly, adequate catch data on fish yields in the communities of Selayar do not exist. However, many of the results of the Phase I pilot in Selayar are in line with the trends projected under the “with project” scenario that led to the NPV estimate presented in the PAD. The number of local fishers involved in illegal fishing activities decreased by 85 percent during Phase I, and the rate of bomb fishing or poison fishing violations recorded decreased from roughly 39 per 100 patrols in 2002 to 18 per 100 patrols in 2003 (see section 4.1). Five villages have established marine reserves that are now legally recognized by the district government. LIPI reported that live coral cover on the fixed transects it measured increased from 24 percent in 2000 to 30 percent in 2001 – an encouraging trend, but one that was not specifically measured in the village reserves and cannot necessarily be attributed to COREMAP.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle		No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
Month/Year		Count	Specialty	Implementation Progress	Development Objective
Lending					
	04/26/1995	6	TTL-NAT.RES.ECON. (1); ENV. (1); TRAD.MNGT./USER RIGHTS SPC. (1) INST.SPC.		
	10/12/1995	6	TTL-NAT.RES.ECON. (1); COASTAL ZONE MGT.SPC. (1); ENV.(1) TRAD.MGT./USER- RIGHTS SPC.(1)		
	09/06/1996	5	TTL-NAT.RES. ECON. (1); VILG.GRANT SPC. (1) ; BIODIVERSITY .SPC. (1); COASTAL ZONE .SPC. (1); MICRO-ENTERPRISE SPC.(1)		
	04/22/1997	4	TTL-NAT.RES.ECON (1); VILG.GRANT.SPC (1);CNTR.PROG. CORD. (1);SR.COORD. ENV.(1)		
	07/25/1997	9	TTL-NAT. RES.ECON.(1); ENV.ECON. (1); VILG.GRANT SPC. (1); COASTAL MGNT.SPC(1);ENFOR. SPC.(1);MONITOR. SPC.(1); LAWYER (1); PROC. (1);DISB. (1)		
Appraisal/Negotiation					
	12/19/1997	9	TTL-NAT.RES.ECON. (1); ENV.MGNT (1); PROJ.ECON. (1); CONFLICT. RESOLUTION SPC. (1); ENV.SPC. (1); AUDIT &ACCTN. (1); PROC. (1); VILG.GRANT SPC. (1) ; DISB. (1)		
Supervision					
	09/07/1998	7	SR. ENVIR. SPC. (1); SR. NAT. RES. ECO./TTL (1); PROJ. MGN SPC/FACILIT. (1); PROJ. ECONOMIST (1); DISB/FINANC/REPORT. (1); PROCUREMENT (1); EXT.	S	S

	03/05/1999	5	AFFAIRS/MEDIA (1) TTL-NAT. RES. ECONO. (1); CO-TTL-ENVIRON. SPC. (1); SURVEILLANCE SPC. (1); FINANCIAL SPECIALIST (1); PUBLIC AWARENESS SPC. (1)	S	S
	10/13/1999	5	CO-ML COASTAL MNG SPC. (1); CO-ML ENVIRON. SPC. (1); SURVEILLANCE SPC. (1); AWARENESS SPC. (1); FINANCIAL MNG SPC. (1)	S	S
	03/07/2000	6	CO-TTL (COASTAL MNG) (1); CO-TTL (ENV. MNG) (1); MCS SPECIALIST (1); POLICY+STRATEGY SPEC. (1); FINANCIAL (PART-TIME) (1); AWARENESS (PART-TIME) (1)	U	U
	08/11/2000	6	CO-TTL (COASTAL MNG) (1); CO-TTL (ENV. MNG) (1); MCS SPECIALIST (1); POLICY+STRATEGY SPEC. (1); FINANCIAL (PART-TIME) (1); AWARENESS (PART-TIME) (1)	S	S
	11/07/2000 Mid-Term Review	5	CO-TTL (COASTAL MGMT; CO-TTL (ENV. MGMT); FIN. MGMT; PROJECT MGMT.	S	S
	05/10/2001	2	CO-TEAM LEADER (1); MCS EXPERT (1)	S	S
	11/16/2001	4	TASK TEAM LEADER (1); CO-TASK TEAM LEADER (1); FINANCIAL MANAGEMENT (1); MCS EXPERT (1)	S	S
	02/28/2002	7	LEAD ENV. SPECIALIST (1); ECONOMIST (1); SR. BIODIVERSITY SPEC. (1); M&C & SURVEILLANCE SP. (1); ADB (1); AUSAID (2)	S	S
	10/07/2002	3	LEAD ENV. SPECIALIST (1); ECONOMIST (1); MC & SURVEILLANCE SPEC. (1)	S	S
	10/03/2003	6	TASK TEAM LEADER (1); COMMUNITY-BASED MGMT. (1); DECENTRALIZATION (1); FISHERIES/CBM (1); INSTITUTIONS (1); MCS (1)	S	S
ICR	08/14/2004	2	TASK TEAM LEADER (1); FISHERIES/CBM (1)	S	S

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Lending	111.7	
Appraisal/Negotiation	30.0	
Supervision	145.2	
ICR	12.03	
Total	298.93	784.10

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	<u>Rating</u>				
<input type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Physical</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Institutional Development</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Environmental</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA

Social

<input type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance

Rating

- | | | | | |
|--------------------------------------|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input type="checkbox"/> Lending | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Supervision | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Overall | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

6.2 Borrower performance

Rating

- | | | | | |
|--|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input type="checkbox"/> Preparation | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Government implementation performance | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Implementation agency performance | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Overall | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

Annex 7. List of Supporting Documents

Author	Title
World Bank	COREMAP I Project Appraisal Document
IUCN	COREMAP I Independent Evaluation (2002)
COREMAP I PMO	COREMAP I Consolidated Report (January 2001 - April 2002)
COREMAP-AMSAT	Final Report: COREMAP I (Asian Development Bank)
PHRD Consultant Team	COREMAP II District and Provincial Consultations
P. Flewelling	Coral Reef MCS: the COREMAP Experience
L. Christanty	COREMAP Phase I Draft Final Report (1999 - 2003)
L. Christanty & P. Domaschenz	Draft Final Report COREMAP I
A. Nontji	COREMAP Tahap I: Upaya Anak Bangsa Dalam Penyelamatan dan Pemanfaatan Lestari Terumbu Karang (2004)
COREMAP I PMO	Implementation Completion Report October 2004
COREMAP I PMO	COREMAP I Mid-Term Review Report (1998 - 2000)
World Bank, Operations Evaluation Department	COREMAP I Project Performance Assessment Report
COREMAP-AMSAT	Design of COREMAP Benefit Monitoring and Evaluation System (COREMAP BME Report 1)
COREMAP-AMSAT	Optimization of Survey Design for Reef Health Monitoring (COREMAP BME Report 2)
COREMAP-AMSAT	Field Manual on Coral Reef Health Monitoring (COREMAP BME Report 3)
COREMAP-AMSAT	Field Manual on Socio-Economic Surveys (COREMAP BME Report 4)
COREMAP-AMSAT	Field Manual on Community-Based Fisheries Monitoring (COREMAP BME Report 5)
COREMAP-CRITC Riau	Riau: Reef Health Status (Baseline Survey-2000)
COREMAP-CRITC Riau	Riau: Reef Health Status (Year Ending September 2001)
COREMAP-CRITC Riau	Fisheries Survey Results: Seneyang-Lingga, Kepulauan Riau (October 2000 to November 2001)
COREMAP-CRITC Susel	Taka Bone Rate: Reef Health Status (Baseline Survey-2000)
COREMAP-CRITC Susel	Taka Bone Rate: Reef Health Status (Year Ending November 2001)
COREMAP-CRITC Biak	Biak: Reef Health Status (Year Ending May 2001)
COREMAP-CRITC Biak	SocioEconomic Baseline Survey of Padaido Islands, Indonesia 2002
COREMAP-AMSAT	SocioEconomic Baseline Survey of Riau, Indonesia
COREMAP-CRITC Taka Bone Rate	SocioEconomic Baseline Survey of Taka Bone Rate, Indonesia (In Indonesian Bahasa only)

Annex 8. Beneficiary Survey Results

The planned Beneficiary Survey was cancelled because of difficulties in contracting with the survey agency that could not be resolved before the monsoon season made travel to Taka Bone Rate impossible.

Annex 9. Stakeholder Workshop Results

Throughout January and February, 2003, a team of government officials from the PMO in Jakarta visited the capital cities of the districts of Biak and Selayar (where the two pilot sites for Phase I were located), and the provincial capitals. In each district the team met with the Regent (*Bupati*), members of the local legislature (*DPRD*), district offices of government agencies (e.g., Fisheries, Planning, etc.), NGOs, national park authorities and other related parties. The intent of these initial consultations was to review the experiences and lessons learned from COREMAP Phase I and solicit information and recommendations to help guide the preparation and design of COREMAP II. The team from the PMO received some essential recommendations from these consultations including:

- *The need for local participation in the design.* Many of the district representatives expressed a strong interest in being further involved in the design of COREMAP II and repeatedly pointed out the weaknesses inherent in centrally designed projects geared for local implementation. Both the district representatives and the team from the PMO concluded that further workshops in each district, with a wide range of interested parties, were essential.
- *The need for a local executing agency.* Representatives from the district governments strongly recommended not only that the Phase II Program should be implemented by an agency at the district level but also that the District Regent should select this agency for each district. Otherwise, if such a decision were to be made by the central government in Jakarta, support by the district government would be tenuous. Many representatives felt it would be most effective for the District Regent to issue an executive decree (SK) establishing a permanent board or committee comprised of local government agencies, community leaders, NGOs and other interested parties (e.g., dive operators, religious authorities, universities). Such a board could oversee the implementation of the program in each district and thus provide for a diverse group of voices to be heard in the decision-making for COREMAP II.
- *District implementation of monitoring.* In Phase I, a Coral Reef Information and Training Center (CRITC) was established in Jakarta at LIPI to collect data on coral reef health and fisheries. However, many representatives felt this information was not shared widely with the resource users and local governments. For this reason, COREMAP II was advised to establish a branch of the CRITC in each of the districts to collect data and conduct monitoring in the district and share the results directly with the communities and resource users.

As these initial consultations recommended, and as part of the preparation for Phase II, COREMAP I sponsored stakeholder workshops in each of the districts with Phase I pilot sites (as well as those identified for inclusion under Phase II). In late March and early April 2003, a workshop was held in both Biak and Selayar with a wide range of interested parties including representatives from fishing communities, local government officials, local business persons, representatives of local women's groups, sub-district government officials, village leaders, NGOs, university staff and officials from the central government (representatives of the MMAF, Ministry of Planning, the Parks Agency and LIPI).

District preparation teams organized by local government were able to ensure that the workshops were communicated widely to all the interested parties. Once in attendance, the workshops were facilitated by an Indonesian NGO, the LATIN Innovation Center, in order to assist all interested parties to provide direct information on local issues and problems concerning the coral reef ecosystems and fisheries. The facilitators from LATIN employed several discussion methods to encourage participation and learning in a creative environment, ranging from conventional techniques (such as brainstorming and group discussions) to utilizing icebreakers and various games. Through these methods, the participants focused on identifying the issues, identifying potential local actions, and then made recommendations for specific activities that would constitute a program for that district (as shown in the figure below).

Although taking place in different districts, several common themes or recommendations resulted from the workshops, most notably around the need for more skills and resources to allow communities to assume a bigger role in managing the resources, with particular attention to the fishing communities, many of which felt they had been marginalized, as well as the need for more livelihood and economic opportunities in these communities and stronger law enforcement on the reefs:

- *Marginalization of many fishing communities.* A common theme emerged that many fishing communities have been marginalized by past government and development programs, and as a result often lacked opportunities to participate in the management of the reef resources upon which they depend, opportunities for employment for women, education opportunities and capital for business development. In Selayar, the most important issue for many of the participants was empowering coastal fishing communities to take responsibility for the reefs, rather than to be marginalized from decision-making.
- *Need for education and awareness:* Low education was also cited as a common problem in many of the coastal communities who had not participated in COREMAP I, including both low awareness and knowledge concerning managing coral reef ecosystems, and also the skills necessary to develop alternative livelihoods to fishing and other reef uses.
- *Need for infrastructure:* Many communities cited the need for more infrastructure to support local economies, such as improved access to markets, better fishing equipment, docks or harbors, and the formation of fishermen's associations or cooperatives.
- *Vicious cycle of coastal poverty.* Many participants in the different workshops noted that because coastal fishing communities were traditionally not empowered to take any responsibilities for the resources, illegal and destructive activities were that much more prevalent, and resulted in degradation of the reefs and fisheries, which only further dwindled the fish resources and incomes. Furthermore, because most fishers had minimum capital for businesses, low education, limited facilities and infrastructure for fisheries, no market information and limited opportunities for alternative sources of income, they often felt no recourse but to continue fishing and in many cases bombing the reef, reinforcing the cycle of poverty.

Additional Annex 10. Borrower's Evaluation Report

1. INTRODUCTION

Indonesia is the world's largest archipelago, consists of 18,110 islands and 108,920 kilometers (km) of coastline. The coastal zone is rich in coral reefs, mangrove swamps, sea-grass beds. With its 82 general and 590 species of hard corals covering 42,000 km² (or 14 percent of the global area of coral reefs), Indonesia is the center of the world's hard coral diversity.

Coral reefs play an important role in fisheries, marine tourism, and coastal protection. They are also of critical significance for science, education, pharmaceuticals, and global conservation. Healthy reefs can produce marine products worth US\$15,000 per km² per year, and are an important source of food and economic opportunities for about 67,500 Indonesian coastal villages. Coastal and marine economic activities have been estimated to account for some 25–30 percent of Indonesia's gross domestic product and provide employment for about 20 million people. The tourism value of coral reefs has been estimated at US\$3,000 per km² per year in low potential areas to US\$500,000 per km² per year in high potential sites, while the net benefits of coastal protection are estimated at US\$15,000–US\$120,000 per km² of reef, depending on the value of the infrastructure (Cesar, 1996).

Despite their importance, Indonesia's coral reefs are the most threatened resources, particularly from poison and blast fishing, over-fishing, sedimentation, and pollution. It was estimated that only less than 7% of the coral reefs in Indonesia are in pristine condition (Suharsono, 2001). Therefore, the Government of Indonesia has identified coral reef management as a national priority.

LIPI (Indonesian Institute of Science) established a Project Management Office (PMO) in a dedicated building. The provincial and district governments in pilot sites created Pokjas (working groups), management groups composed of part time staff from different departments and interested agencies to coordinate implementation of COREMAP at the village sites.

2. PROGRAM DESCRIPTION

The Coral Reef Rehabilitation and Management Program (COREMAP) was launched in 1998 as a 15-year program of the Government of Indonesia (GoI). The program has to be run in three phases. Phase I was funded through loans from the World Bank (WB), Asian Development Bank (ADB) and grants from AusAID and the Global Environment Facility (GEF) and counter part funding from GoI.

2.1. Goal

COREMAP is a 15-year program of the GoI, with an overall goal "to protect, rehabilitate, and achieve sustainable use of coral reefs and associated eco-systems in Indonesia, which will, in turn, enhance the welfare of coastal communities".

2.2. Program Phases

The Program was funded by the World Bank (WB), Asian Development Bank (ADB), Australian Agency for International Development (AusAID) and the Government of Indonesia (GoI) and is divided into three phases:

Phase I (1998-2001) is a 3 year "Initiation Phase" designed to test and develop viable community-based management systems in pilot sites (this phase is extended to July 2004);

Phase II (designed to start at 2001, due to the extension of phase I then is scheduled to start at 2005) is a 6 year "Acceleration Phase" to strengthen and expand community-based management systems to other sites;

Phase III is a 6 year "Institutionalization Phase" to ensure institutional sustainability of program activities.

The first phase had been extended for a one year period until October 2002 following an agreement reached with COREMAP donors (particularly the World Bank and ADB) during the Mid-term Review (October 16-November 7, 2000). With a particular view to sustainability of the Project, GoI and the World Bank agreed to extend the duration of Phase I to July 31, 2004 to bridge the period until COREMAP II could commence.

2.3. Components

COREMAP Phase I funded by the World Bank has the following components:

- Project Management;
- Policy, Strategy and Legal Framework;
- Community Based Management;
- Monitoring, Control & Surveillance (MCS);
- Public Awareness.

3. PROGRAM IMPLEMENTATION AND ACHIEVEMENTS

3.1. Program Implementation

3.1.1. Organization

- LIPI was assigned as Executing Agency.
- At national level, the organization consists of Steering Committee, Technical Committee and Project Management Office. At the provincial and district levels the organization consist of Task Force (Pokja) chaired by Bappeda. Within the Task Force are Technical Units.
- The Project Management Office (PMO) has an established structure for implementing the COREMAP program. This structure includes a PMO Director, a Secretary, and 4 Assistant Directors in charge with the main components: CRITC, Public Awareness, CBM, and MCS.

3.2. Achievements

3.2.1. Project Management

The Provincial and District Pokjas (Task Force) were established through Governor's and Bupati's Decrees. The Pokja includes stakeholders (privates and NGOs) as well as Government Officials relevant to coastal and marine resource management. Considerable efforts have been implemented to enhance Pokja performance to ensure that they incorporated the communities and worked effectively within the existing structure. Pokja held regular meeting, prepared agendas and work plan and reviewed progress reports.

3.2.2. Policy, Strategy and Legal Framework

- The National Policy and National Strategy has been produced and formally handed to DKP (Ministry of Marine Affairs and Fisheries) for dissemination to the relevant agencies at National and Regional levels as guidance for action plan. Inputs regarding coral reef management and the prohibition of destructive fishing practices have been adopted in the new Fishery Law and the Coastal Management Law.
- An integrated Ranperda (draft of District Regulation) on the "Management of Land, Coastal and Marine Resources in Biak Timur and Padaido" was drawn up, revised and finalized by the law bureau of the BAPPEDA (Regional Planning and Development Agency) and has been submitted to the District Parliament for approval prior to final signing by the Bupati for enactment as new Perda (District Regulation);
- Two Perdas were produced: "The Utilization of the Conservation Area in Taka Bonerate National Park" (Perda No. 17/2003) and "Management of Marine and Coastal Resources in Selayar District" (Perda No. 16/2003) both were signed by the Bupati of Selayar on 30 December 2003.

3.2.3. Community Based Management

- CBM (Community Based Management) Guideline were developed and produced through a consultative process including representatives from each COREMAP field locations. The Guidelines provide helpful advice for the implementation of CBM activities and establish a framework for funding, community organization and alternative income generation. A simplified version of the guideline has been used as a manual for village motivators.
- Each participating village in Taka Bonerate (Selayar District) formed three main community groups and democratically elected at least three motivators. The community groups cover the interests of gender

equity, conservation and development. Motivators represent the community groups, they are involved in planning and implementing activities. They also prepare annual plans and 3-monthly reports. COREMAP Community Centers were established in 5 villages.

- Community Credit Institution which manage seed fund were established in every COREMAP village in Taka Bonerate. The seed fund has been revolved at least once, and has evolved into Rp 316.000.000.00 from Rp 235.000.000.00 and at the mean time the number of community groups (Pokmas) receiving/ borrowing the funds also significantly increased, from 40 groups (members involved are 197 people) into 90 groups (members involved are 390 people).
- Besides the main capital plus interest which has been determined prior to borrowing the seed fund, each Pokmas is obliged to contribute to coral reef conservation fund, known as “Dana *SeKarang!*” or the “*SeKarang!* Fund”. It is a small portion of the financial benefits, put aside as “user fee” to raise community understanding that: (i) in return for receiving valuable products from coral reef/ marine resources they must protect/ maintain the sustainability of the resources, by contributing to *SeKarang!* conservation fund, even if it is only 0.05% of the benefit; and (ii) the fund would be used to support coral reef surveillance and conservation activities. To date, the communities already collected at least Rp 300,000 to Rp 1,500,000 to the *SeKarang!* Funds in each island.
- The community capacity in safeguarding their marine/ coastal resources continuously increasing, as reflected in the increasing amount of information/ reports submitted by the communities in meetings/ dialogues with the Bupati and DPR Kabupaten. Members of the District Parliament show concerns on sustainable management of coral reefs and they are actively involved in various COREMAP meetings held by Pokja;
- The Coral Reef Management Plans (CRMPs or RPTKs) are living documents, which are progressing along with development in the fields and in the communities. The RPTKs have been endorsed as “lembaran desa” by the village heads and approved by the Village Council (BPD) in all target villages. Both the District Government and the District Parliament have given full support on the implementation of CRMPs in Taka Bonerate.
- Village grants have been disbursed based on the acceptance and approval of various community proposals on environmentally friendly programs related to CRMP. The grant is provided as an appreciation to local communities’ supports and participations on the implementation of COREMAP and CRMP in Taka Bone Rate to stimulate further actions in the implementation of the CRMP;
- 85 percent reduction in the number of local fishers involved in illegal fishing activities has been recorded in Taka Bonerate;
- Rumsram (an NGO) finally received a contract for undertaking CBM implementation in Padaido (Biak-Numfor District). However, the initial contract was only good for 1.5 months due to the termination of COREMAP Phase I in October 2002, which was unrealistic; therefore, an extension until June 2004 was awarded to Rumsram;
- Currently, each of the six villages already produced their first draft of their CRMPs. Eventhough the drafts are not perfect but it reflected the bottom up and participatory processes that went in the planning. Rumsram has been careful in conducting social preparation for the drafting of the CRMPs and the initial AIGA (Alternative Income Generating Activities) proposals.

3.2.4. Monitoring, Control and Surveillance

- Successful arrests of illegal fishers were undertaken at both Taka Bone Rate and Padaido;
- MCS (Monitoring, Control and Surveillance) operational manuals were developed at the National level and for Taka Bonerate and Padaido. Technical training provided to all officers involved in MCS - Central office and field locations;
- Contracts developed and implemented for MCS services at Biak and Selayar. Infrastructure established to support MCS operations;
- A computer information system (MCSIS) has been developed for processing MCS data. Recent developments have facilitated the production of comprehensive reports determining strengths and weaknesses in existing approaches and for guiding future management efforts. However, the effectiveness of its implementation is hindered by the high cost and the complexity of the program;

- The MCS operations at Padaido are in order and there has been significant progress achieved within the 3-year operation. Coordination with other parties, particularly with the Police and the Navy significantly improved;
- Collaboration between the Selayar MCS Unit and the Taka Bonerate Park Authority coupled with the involvement of law enforcement officers in MCS operation is proven to be effective. At least 12 violation cases have been brought to court, for which the violators received a range of 4 months to 2 year jail term.
- Assets of MCSIS (computers, servers, softwares and related equipments) and MCS (transport vessels, speedboats and telecommunication equipments) have been officially transferred from LIPI (as Executing Agency of COREMAP Phase I) to DKP (as Executing Agency of COREMAP Phase II) on 13 July 2004.

3.2.5. Public Awareness

- Communication activities (TV and radio programs, spots, media outreach, educational materials, events and community meeting and workshops, etc) contributed to the awareness raising, and positive attitude of public and coastal communities. It resulted an impact which demonstrated by the TNS – JHUCCP impact survey (Taylor Nielsen Sofres – John Hopkins University) in December 2001. General public as well as coastal communities has demonstrated an increase in awareness and positive attitude after the campaign intervention of coral reef management. 63 percent of the general public and 71 percent of coastal community residents were aware of *SeKarang!* campaign. The survey has also shown an increase in understanding the importance of local community taking responsibility for coral reef management from 2000 (baseline) and end of 2001 (impact) survey in each COREMAP sites (Source: COREMAP/JHUCCP/TNS Communication Impact Survey);
- The higher the exposure to COREMAP communication activities/ materials, the larger the impact on knowledge, attitudes, motivations, and involvement in coral reef management efforts. People with more exposure to COREMAP communications were more likely to recognize the seriousness of some issues and to feel optimistic about the chances of success;
- An increase in the reported use of relatively reef-friendly techniques appears to be related to campaign exposure. For example, about 39 percent of fishermen with low to medium exposure to COREMAP communications reported using hook and line techniques, compared to 46 percent of fishermen with high exposure;
- The positive impact continued as shown in the attitude and involvement in coral reefs management efforts by general public and coastal communities, subsequent to the consultative terms of JHUCCP, in 2003 and onwards. This is contributed by the LIPI - public communication team, which succeeded in continuing and developing innovative materials as well as programs for the community;
- Production and socialization of a series of educational books on marine science for grade 1-6 with a teacher manual. The books were written in practical way to make easy for students of different grades to understand the mission;
- Production and socialization of awareness pocket books in Moslem and Christian version to save the coral reefs;
- Four short radio programs (60 seconds each) were produced and aired on radio stations in the field locations. These four short programs were aired a total of 16,032 times;
- Six TV features developed and televised nationally. Two television talk show presentations prepared and televised;
- The success of the COREMAP Public Communication/ Awareness program was officially recognized by winning the Gold Quill Award (International Association of Business Communicators) 2002;
- Annual events, such as the Coral Reef Awards of 2001, the Coral Reef Ambassadors of 2002, Communication Forum, and the Young Innovators Contest of 2003 were very successful in raising concerns, awareness, and responsibilities of each of the target groups.
- The involvement of divers, young musicians, celebrities, etc. is proven to be effective in COREMAP *SeKarang!* Awareness campaigns.

- COREMAP participated in national and international exhibitions undertaken for various stakeholders i.e. educational practitioners, traders, private sectors, environmental practitioners etc. Most exhibitions were conducted in collaboration with LIPI Public Relation Bureau. COREMAP also attended the Third International Conference Artificial Surfing Reefs 2003 – Unifying Amenity, Ecology, and Coastal Protection in New Zealand sponsored by AusAid.

3.2.6. Coral Reef Information and Training Centres (CRITCs)

CRITCs during phase I were funded by ADB and GOI, its activities were carried out at all COREMAP sites, including Selayar and Biak-Numfor districts. Equipments were also disbursed to Kupang (East Nusatenggara). The following are some highlight of CRITCs activities:

- Coral Reef Map of Indonesia produced in cooperation with Indonesian Aerospace Agency (LAPAN).
- National BME (Benefit Monitoring and Evaluation) system designed and established at COREMAP sites – reef health, fish landings, community income and welfare.
- CRITC Manual and Metadata report produced in 2001.
- Ecological and Socio Economic Surveys conducted for proposed Phase II at Wakatobi, Raja Ampat and Spermonde.
- Applied Research Agenda implemented to provide mechanism for broader environmental and economic studies relating to coral reef management.
- A book on Coral of Indonesia was published in 2003.
- A Safety at Sea Manual (finance and organized through AusAID) was produced based on international standard regulations and training materials from the Indonesian Department of Transportation. The Safety at Sea Manual and training curriculum has been distributed to all COREMAP provinces.

4. FINANCIAL SUMMARY

Based on the original design, financial management of the project is undertaken by the central government through Project Management Office under LIPI as Executing Agency. LIPI was committed and consistently allocated adequate counter budget for the whole COREMAP phase I activities at the national and regional levels.

4.1. Allocated Budget

The total allocated budget of the world bank for the COREMAP I activities as presented in the Project Appraisal Document (PAD) is US\$12,800,000.- consisted of US\$6,900,000.- (54 percent) IBRD Loan, US\$4,100,000.- (32 percent) GEF Grant and equivalent to US\$1,800,000.- (14 percent) GoI counterpart budget. However the counterpart budget allocated in the Annual Project Budget (DIP) from Fiscal Year 1998 to 2004 was equivalent to US\$3,097,713.- (22 percent). This figure accommodates the one year delayed of effective implementation of COREMAP Phase I and it ensured the sustainability of the project prior to the commencement of COREMAP Phase II World Bank.

4.2. Disbursement

The total actual expenditures by 31 July 2004 (Loan closing date) amounting US\$ 6,791,576 for IBRD Loan, US\$4,704,061 for GEF grant and equivalent to US\$ 2,573,389 for counterpart budget. The budget realizations were calculated 98 percent, 99 percent and 83 percent for IBRD Loan, GEF Grant and GoI counterpart budget respectively. Accordingly, the actual budget percentage of the total project cost for IBRD Loan, GEF Grant, and GoI counterpart budget were indicated as 51 percent, 30 percent, and 19 percent respectively. This figure shows full commitment of LIPI to allocate counterpart budget as mentioned in financing plan of the PAD.

4.3. Audit Report

Based on the Financial Covenant Section 4.06 of the Loan Agreement, the Project has been audited once in a year since 1998 by the Independent Auditor (BPKP). The Project has responded to follow up promptly all auditor evaluations of the following reports:

- FY 1999/2000, Report LAP No.02.00.07.2301/D.IV-1/2000/June 28, 2000;
- FY 2000 and FY 2001, Integrated Report No. LAP 02.00.07.278/D.1.4/2002, June 19, 2002;

- FY 2002, Report No. LAP 313/D104/01/2003, June 16, 2003;
- FY 2003, Report No. LAP 224/D104/01/2004, June 4, 2004.

All these reports have been submitted by BPKP directly to the Bank.

5. LESSONS LEARNED

5.1. Project Management

- The institutional capacity in the province and kabupaten varied, depending on the availability of qualified human resources assigned in the program.
- Although functioning as the COREMAP PMO partner, Pokja is an ad hoc body, which results in the difficulty in obtaining full time staff for the Pokja. However, the routine tasks as government civil servants holding certain administrative posts made it impossible for the Pokjas' staff to serve full-time commitment to the COREMAP project.
- The managerial capacity of the PMO and Pokja staff should be increased through various level of management skill training.
- The job description for and delegation of responsibility among staff at the PMO and Pokja should be clearly defined.
- An independent evaluation team should be established at both provincial and kabupaten level to assess, criticize, and provide feedback to program progress and achievement in each program component.

5.2. Community Based Management (CBM)

5.2.1. Taka Bonerate

- CBM implementation has been successful in raising local communities' concern and awareness for safeguarding their marine and coastal resources from destructive fishing practices.
- The program has contributed to community empowerment, particularly in their organizational capacity.
- The community has become more critical regarding policy/ activities related to the utilization of marine/coastal resources in their area.
- The village grants have been successful in motivating the community to undertake environmentally friendly practices and to participate in other community development activities.
- Direct observation is a practical way to motivate and raise entrepreneurship of the community, as they need a real example and success stories.
- The success of any economic innovation depends on the process and commitment of each individual within a community group. Transparency and responsible behavior can be motivated if there is a proper control and audit by the community itself.
- Failure in some economic activities funded with seed funds cannot be generalized as total failure. Individual assessment should be conducted to assess constraints, and the LKM (Community Credit Institution) treasurers should be trained on how to draw credit including commitment to pay in installments.
- Village motivators are integral part of CBM program, and will play more important roles after the termination of the project.

5.2.2. Biak/Padaido

- Bottom up approach and community consensus are vital to achieve successful CBM implementation in Biak.
- Community empowerment, particularly in organizational capacity, book-keeping, and skill training are important tool to achieve CBM goals in Biak.
- The involvement of local community since the planning stage is critical for ensuring community acceptance to CBM programs.
- The village grants have been successful in motivating the community to undertake environmentally friendly practices and to participate in other community development activities.

- The success of any economic innovation depends on the process and commitment of each individual within a community group. Transparency and responsible behavior can be motivated if there is a proper control and audit by the community itself.
- Village motivators are integral part of CBM program, and will play more important roles after the termination of the project.

5.3. Monitoring, Control and Surveillance (MCS)

5.3.1. Taka Bonerate

- Collaboration with the Taka Bonerate Park Authority and involvement of law enforcement officers in MCS operation is proven to be effective.
- The capacity of the Head of the MCS Unit is critical to successful implementation of the program.
- The regional government should be aware that MCS operation is their responsibility and not merely a project trial.

5.3.2. Biak/Padaido

- Careful assessment of costs sharing for maintenance and operation should be undertaken before the provision of new infrastructure, such as transport vessel and speed boats to the region to ensure the sustainability of funding after the project termination.
- Involvement of civil servants is preferable to minimize burden for honorarium of the patrol crew, which currently amounted up to 64 persons per month.
- The regional government should be involved in the overall project cycle, including the planning of new intervention which required large funding such as MCS system.

5.3.3. Monitoring, Control and Surveillance Information System (MCSIS)

- Adequate human resources capacity is required prior to the implementation of a sophisticated computerized system.
- Development of any integrated information system should be undertaken in collaboration with other institutions developing similar models/systems.
- MCSIS model should be practical, simple, and compatible with other monitoring data base.

5.4. Research and Monitoring

- The BME (Benefit Monitoring and Evaluation) system should be continued with increasing community participation in the monitoring activities.
- Research and implementation of well proven technology contribute significantly in the effort to raise community participation and responsibility for sustainable coral reef management.
- Applied science/research is important in aiming to achieve the balance between coral reef utilization and conservation/ management.

5.5. Public Awareness/Communication

- Public awareness/communication should be undertaken as routine/continuous programs at all levels in order to achieve changes from negative/ destructive behavior into a positive one.
- Communities at the district level should be given a sense that they are part of an important social movement by involving them since the early stage of awareness campaign.
- COREMAP-LIPI has a strong public communication team with high capability for developing new innovations and approach to public communication program;
- The Public Communication Team should continue its linkages with key stakeholders, such as press, divers, teachers, and NGOs.
- Annual events like Coral Reef Award, Coral Reef Ambassadors, and Young Innovators Competition should be continued.
- COREMAP-LIPI should widen its effort on developing educational based program.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions:

- Although the planned project activities were largely completed by the closing date, yet activities involving local communities should not be disrupted by contract termination. Therefore a bridging or transitional funding should be made available until the commencement of COREMAP Phase II.
- The active participation of the communities in the overall project cycle is the key to achieve successful implementation of CBM.
- AIGA (Alternative Income Generating Activities) were limited and sometimes defined without adequate assessment of their feasibility or other alternatives. Moreover, there is no guarantee of the marketing of the products.
- The MCS program in Biak and Selayar is expensive to operate, its sustainability beyond the project period is questionable.

6.2. Recommendations:

- To run the project it is suggested that full time staff should be employed.
- To achieve successful CBM, integrating COREMAP Program into an overall village program is important to ensure its sustainability beyond the project period.
- Marketable AIGA products need external expertise to assess the feasibility and undertake market survey.
- The expensive MCS operation should be sealed down and it is critical to maintain the basic MCS operation required to minimize/control destructive fishing practices;
- The public communication component should be widened to cover early awareness and involvement of the youth through educational based program. Teachers and religious leaders are key actors in raising communities concerns on sustainable marine and coastal resource management.
- Community training should be focused on practical and applicable aspects. Involvement of local entrepreneurs in business and investment training is a critical factor to obtain multiplier effects. A balance must be achieved between activities aimed at reef conservation and those targeting improvements in the quality of life within the community.
- Local communities should be encouraged to undertake regular ecological and socioeconomic monitoring of the utilization and management of coral reef related resources, to enable them to produce periodic environmental and socioeconomic profiles.

Additional Annex 11. GEF Grant and Co-financing

Co financing (Type/Source)	GEF Grant	Bank: IBRD	Government	Other	Total
	(US\$ m)	(US\$ m)	(US\$ m)	(US\$ m)	(US\$ m)
	Plan/Actual	Plan/Actual	Plan/Actual	Plan/Actual	Plan/Actual
- Grants	4.10/4.08				4.10/4.08
- Loans		6.90/6.79			6.90/6.79
- Credits					
- Equity investments					
- In-kind support			1.80/2.56		1.80/2.56
- Other					
Totals	4.10/4.07	6.90/6.78	1.80/2.56		12.80/13.43

