

Document of  
The World Bank

Report No: 27176-IND

GEF PROJECT DOCUMENT  
ON A  
PROPOSED LOAN IN THE AMOUNT OF USD 33.2 MILLION  
AND A PROPOSED CREDIT  
IN THE AMOUNT OF SDR 15.7 MILLION (USD 23.0 MILLION EQUIVALENT)  
AND A GRANT FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND  
IN THE AMOUNT OF US\$ 7.5 MILLION  
TO THE  
REPUBLIC OF INDONESIA  
FOR THE  
CORAL REEF REHABILITATION AND MANAGEMENT PROJECT (PHASE II)

April 21, 2004

**Rural Development and Natural Resources Sector Unit  
East Asia and Pacific Region**

## CURRENCY EQUIVALENTS

(Exchange Rate Effective as of March 30, 2004)

Currency Unit = US Dollar  
USD 1 = 8,500 Rupiah  
1,000 Rupiah = 0.12 USD

FISCAL YEAR

July 1 — June 30

## ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AIG	Alternative Income Generation
AIJ	Association of Independent Journalist
APBD	Budget for Provincial/District Level
APL	Adaptable Program Loan
AusAID	Australia Agency for International Development
<i>BAPPEDA</i>	Regional Planning and Development Agency
<i>BAPPENAS</i>	National Development Planning Agency
BMT/LKM	Faith Based Credit and Savings System
<i>BPD</i>	Village Parliament
<i>BPKP</i>	National Internal Audit Agency
<i>BPS</i>	Agency for National Statistics
<i>Bupati</i>	District Head
CAS	Country Assistance Strategy
CCE	Coastal Community Empowerment
CBA	Cost Benefit Analysis
CBM	Community-Based and Collaborative Management
CCE	Coastal Community Empowerment
CBCM	Community Based Collaborative Management
CDD	Community Driven Development
CFAA	Country Financial Accountability Assessment
CFs	Community Facilitators
CI	Conservation International
CMC	Coastal Management Coordination
COFISH	Coastal Community Development and Fisheries Resource Management
COREMAP	Coral Reef Rehabilitation and Management Program
CMU	Country Management Unit
CPAR	Country Procurement Assessment Review
CPFA	Country Profiles of Financial Accountability
CPMU	Central Program Management Unit
CPUE	Catch-per-unit effort
CRITC	Coral Reef Research Information and Training Center
CRMIS	Coral Reef Management Information System
CRMP/RPTK	Village Coral Reef Management Plans
DGCSI	Director General, Coasts and Small Islands
DKP	Ministry of Marine Affairs and Fisheries
<i>Dinas</i>	Autonomous Agency at District Level
Dinas KP	Autonomous District Agency of Marine Affairs and Fisheries
DIP	National Budget
DIPP-LN	Counterpart Budget for Foreign Funding
DPIPs	District Program Implementations Manuals

DPMU	District Program Management Unit
DPR	House of Representatives
DPRD	District Parliament
EA	Executing Agency
EEZ	Exclusive Economic Zone
EIRR	Economic Internal Rate of Return
ESIMF	Environment and Social Impact Management Framework
EOP	End of Project
ESW	Economic and Sector Work
FIRR	Financial Internal Rate of Return
FMR	Financial Monitoring Report
G8	Group of Eight Industrialized Nations
GDP	Gross Domestic Product
GEF	Global Environment Facility
GoI	Government of Indonesia
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IMA	International Marine Life Association
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
KDP	Kecamatan Development Project
<i>KEPPRES</i>	Presidential Decree
<i>KIMPRASWIL</i>	Ministry of Settlement and Regional Infrastructure
Km	Kilometer
KMK	Ministry of Finance On-Lending Directive (Kebijakan Menteri Keuangan)
KPKN	MOF Treasury Office
KSDA	Nature Resources Conservation Office
KTP	ID Card
LIPI	Indonesian Institute of Sciences
LIT	Line-Intercept Transect
MAC	Marine Aquarium Council
MCAs	Marine Conservation Areas
MCS	Monitoring, Control, and Surveillance
M & E	Monitoring and Evaluation
MCRMP	Marine and Coastal Resources Management Project
MMAF	Ministry for Marine Affairs and Fisheries
MAMTI	Marine Market Transformation Initiative
MOF	Ministry of Finance
MPA	Marine Protected Areas
MOU	Memorandum of Understanding
NCB	National Competitive Bidding
NCU	National Coordination Unit
NGO	Non-government Organization
NPIP	National Program Implementation Plan
NRM	Natural Resource Management
NSC	National Steering Committee
NTC	National Technical Committee
OD	Operational Directive
OM	Operation Manual
OP	Operational Policy
PAD	Project Appraisal Document
PATA	Pacific Asia Travel Association
PCAR	Procurement Capacity Assessment Report

<i>Perda</i>	Regional Government Regulation
<i>Perdes</i>	Village Ordinance
PHKA	Directorate General of Forest Protection and Nature Conservation
PHRD	Policy and Human Resources Development Fund
Pimbagpro	Project Manager at District Level or Marine National Park
<i>Pimpro</i>	NCU's Project Manager
PIP	Project Implementation Plan
PIU	Project Implementation Unit
PKL	Practical Field Training Program
PMM	Program Management Manual
PMU	Program Management Unit
POM	Project Operational Manual
PRA	Participatory Rapid Appraisal
<i>PROPENAS</i>	Government's Current Medium-term Development Strategy
QCBS	Quality and Cost Based Selection
RRI	Rapid Resource Inventories
SK	( <i>Surat Keputusan</i> ) Decision Letter
SETO	Senior Extension and Training Officer
SPM	Payment Instructions
SPP	Payment Requests
<i>SUSENAS</i>	National Census Data for Program District/National Socio-economic Survey
TA	Technical Assistance
TNC	The Nature Conservancy
TOR	Terms of Reference
USAID	United States Agency for International Development
U.U.	Law
VMs	Village Motivators
VSAT	Very Small Aperture Terminal
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development
WWF	World Wildlife Fund for Nature

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**INDONESIA**  
**CORAL REEF REHABILITATION AND MANAGEMENT PROJECT (PHASE II)**

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INDONESIA

Coral Reef Rehabilitation and Management Project (Phase II)

**GEF Project Document**

East Asia and Pacific Region

EASRD

<p><b>Date:</b> April 21, 2004  <b>Country Director:</b> Mr. Andrew Steer  <b>Sector Manager/Director:</b> Mr. Mark D. Wilson  <b>Project ID:</b> P071316  <b>Lending instrument:</b> Adaptable Program Loan (APL)</p>		<p><b>Team Leader:</b> Mr. Pawan G. Patil  <b>Sectors:</b> General agriculture, fishing and forestry sector (100%)  <b>Themes:</b> Other environment and natural resources management (P), Decentralization (S), Civic engagement, participation and community driven development (S)  <b>Environmental screening category:</b> B – Partial Assessment  <b>Safeguard screening category:</b> S2</p>				
<b>Program Financing Data:</b>						
<p><input checked="" type="checkbox"/> Loan   <input checked="" type="checkbox"/> Credit   <input checked="" type="checkbox"/> Grant   <input type="checkbox"/> Guarantee   <input checked="" type="checkbox"/> Other:  For Loans/Credits/Others: <b>7.5</b>  Total Bank financing (US\$m.): <b>56.2</b>  Proposed Terms: <b>IBRD: Variable Spread Loan; IDA: Standard Credit</b></p>						
<b>Financing Plan (US\$m.)-</b>						
Source	Local	Foreign	Total			
Borrower	<b>10.9</b>	--	<b>10.9</b>			
IBRD/IDA	<b>48.6</b>	<b>7.6</b>	<b>56.2</b>			
Others/GEF	<b>5.0</b>	<b>2.5</b>	<b>7.5</b>			
<b>Total</b>	<b>64.5</b>	<b>10.1</b>	<b>74.6</b>			
<p>Borrower: Republic of Indonesia / Ministry of Finance  Responsible agency Ministry of Marine Affairs and Fisheries (MMAF). Jl. Medan Merdeka Timur No.16, JakartaPusat—Indonesia. Tel: (62-21); 3519070 Fax: (62-21) 3522560/3522045.</p>						
<b>Estimated disbursements (Bank-GEF FY/US\$m)</b>						
FY	05	06	07	08	09	10
Annual	<b>2.0</b>	<b>10.0</b>	<b>17.0</b>	<b>18.0</b>	<b>12.0</b>	<b>4.7</b>
Cumulative	<b>2.0</b>	<b>12.0</b>	<b>29.0</b>	<b>47.0</b>	<b>59.0</b>	<b>63.7</b>
<p><b>Program implementation period:</b> Phase I (1998-2004); Phase II (2004-2009); Phase III (2010-2015)  <b>Expected effectiveness date:</b> September 1, 2004  <b>Expected closing date:</b> December 31, 2009</p>						
<p><b>Does the project depart from the CAS in content or other significant respects?</b>  <b>Ref. PAD A.3</b></p>					<p>? Yes   X No</p>	

Does the project require any exceptions from Bank policies? <i>Ref. PAD D.7</i>	? Yes   X No
Have these been approved by Bank management?	? Yes   ? No
Is approval for any policy exception sought from the Board?	? Yes   ? No
Does the project include any critical risks rated “substantial” or “high”? <i>Ref. PAD C.5</i>	X Yes   ? No
Does the project meet the Regional criteria for readiness for implementation? <i>Ref. PAD D.7</i>	X Yes   ? No
<b>Program development objective</b>	
<p>The development objective of the Coral Reef Rehabilitation and Management Program (COREMAP) Adaptable Program Loan (APL) is <i>to establish viable, operational, and institutionalized coral reef management systems in priority coral reef sites in Indonesia.</i></p> <p>The development objective of COREMAP Phase II is that viable reef management systems are established in at least six priority Districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or preserve intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia.</p>	
<b>Program description [one-sentence summary of each component] <i>Ref. PAD B.3.a, Technical Annex 4</i></b>	
<p>The Coral Reef Rehabilitation and Management Program (COREMAP) Phase II would be implemented through three components:</p> <p><b>(A) Institutional Strengthening</b> - to enhance government institutional responsiveness to meet the needs of coastal communities, in support of collaborative management of marine reserves and other marine protected areas.</p> <p><b>(B) Community Based &amp; Collaborative Management</b> - to empower all coastal communities and institutions throughout program districts to sustainably co-manage coral reefs and associated ecosystems to increase incomes which will in turn enhance community welfare.</p> <p><b>(C) Public Awareness, Education and Extension</b>- to promote societal awareness of the benefits of coral reef ecosystem conservation and sustainable use that leads to behavioral change.</p>	
<b>Which safeguard policies are triggered, if any?</b>	
<p>Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)</p> <p>Natural Habitats (OP 4.04, BP 4.04, GP 4.04)</p> <p>Indigenous Peoples (OD 4.20)</p>	

### Negotiations:

- Establishment of NCU in MMAF, PIU in LIPI and PMUs in six proposed districts and appointment of qualified staff (including a qualified project manager in NCU, PIU and PMUs) in accordance with the institutional structure agreed to in the DPIPs.
- Adoption by NCU, PIU, and PMUs of Environmental and Social Impact Management Framework (ESIMF) and Governance/Anti-Corruption Strategy, satisfactory to the Bank.
- Completion of draft Operational Manuals (Financial Management/Procurement Manual and CBM Manual), satisfactory to the Bank.
- Completion of the Terms of Reference (ToR) for procurement and financial management capacity building consultants, audit of project financial statements review firm, community facilitators and senior extension training officers, and other technical assistant consultants, satisfactory to the Bank.

### Loan/Credit effectiveness:

- Project financial management consultants to be selected based on TORs approved by the Bank.
- All Implementation Manuals (CBM, Collaborative Enforcement, Research and Monitoring Protocols) adopted by NCU and participating District PMUs and the NPIU.
- The Borrower provide to the Association evidence, acceptable to the Association, that each Participating Province and each Participating District has taken the necessary measures for prohibiting and enforcing destructive fishing practices in such Participating Province and such Participating Districts.

### Covenants applicable to program implementation:

- The Government of Indonesia (GOI) shall maintain until completion of the Project the National Coordination Unit with adequate funds and other resources and staffed by qualified and experienced personnel including a NCU Director; an Executive Secretary; a Program Manager assisted by personnel from the Ministry of Marine Affairs and Fisheries, LIPI, and from the Directorate General of Forest Protection and Nature Conservation.
- The GOI shall maintain until completion of the Project the National Program Implementation Unit in LIPI, the National Coral Reef Information and Training Center, and the National Monitoring, Evaluation and Feedback Unit with adequate funds and other resources and staffed by qualified and experienced personnel.
- The Districts shall maintain until completion of the Project a Program Management Unit, with adequate funds and other resources and staffed by qualified and experienced personnel including a Director, an Executive Secretary, a Program Manager, a representative from the Dinas KP from such Participating District, and a representative from the National Marine Park or marine protected area in such Participating District.
- By June 30, 2005, the Districts shall establish a Coastal Community Empowerment Board, with representatives from the GOI and from civil society.
- By June 30, 2005, the Districts shall establish until completion of the Project a District Coral Reef Information and Training Center with adequate funds and other resources and staffed by qualified and experienced personnel.
- The GOI shall adopt and apply in the implementation of the Project, the Project Management Manual.
- By June 1, 2008, the GOI shall establish an independent evaluation panel and cause such independent panel to carry out an evaluation of the Project by not later than March 1, 2009; and furnish the results of the evaluation to the Bank and Association for comments.
- The GOI shall take all measures necessary to ensure that any development project proposed to be carried in shall only be carried if a satisfactory environmental study of said proposed project shall have been completed and established that any potential adverse effect on the Project site will be avoided or mitigated.
- The GOI shall make Grants available to Participating Villages up to an aggregate amount not to exceed Rp. 10,000,000 and ensure that the works are carried out in accordance with the provisions of the Agreement and the provisions of the Village Grant Guidelines.

- The GOI shall make Grants available to a Participating Village up to an aggregate amount not to exceed Rp. 50,000,000 and the adoption of a village plan for alternative income generation activities in accordance with the provisions of the Village Grant Guidelines; and ensure that a Subsidiary Loan Agreement, is entered into between the relevant Participating Village and the selected village financial institution.
- The GOI shall make Grants available to a Participating Village up to an aggregate amount not to exceed Rp. 50,000,000 upon the adoption by such Participating Village of a draft coral reef management plan; and ensure that the Sub-projects are carried out in accordance with the provisions of the Agreement and the provisions of the Village Grant Guidelines.
- The selected Sub-project by a Participating Village shall qualify as eligible for financing out of the proceeds of the Credit and the Loan only if the Sub-project is an investment project, is technically, socially and environmentally viable, and has been designed in accordance with the criteria and procedures set forth in the Village Grant Guidelines, and the Sub-project proposal has been publicly discussed among, and agreed to by, the villagers in the Participating Village under the coordination of the LKMD.
- The Sub-project selected by a Participating District shall qualify as eligible for financing out of the proceeds of the Credit and the Loan only if the Sub-project is an investment project, is technically, socially and environmentally viable, and has been designed in accordance with the criteria and procedures set forth in the District Grant Guidelines.
- The GOI, in accordance with its commitment to the protection of the interests of Isolated Vulnerable People shall (a) take measures to protect customary user rights of Isolated Vulnerable People; (b) ensure that the benefits received by the Isolated Vulnerable People under the Project are in harmony with their economic, social and cultural preferences; (c) through a process of informed participation, to involve concerned Isolated Vulnerable People in the design and implementation of coral reef management plans; and (d) mitigate or avoid adverse effects on Isolated Vulnerable People caused or likely to be caused by the Project.
- By November 30, 2006, the GOI shall furnish the Bank and Association for comments a draft plan for the establishment and implementation of the partial credit guarantee program, including the description of specific policies and procedures for the program, and the reporting requirements and accounting procedures for the banking institution selected for the guarantee reserve account.
- Not later than January 1 in each year, commencing January 1, 2005, the GOI shall provide recommendations of the studies carried out in the preceding year and not later than July 31 in each year, commencing July 31, 2005, prepare action plans for the implementation of the recommendations of the studies and the Bank's and Association's recommendations carried out in the preceding year, and carry out each of such action plans.
- The GOI shall carry out with a training plan, the trainings, workshops, awareness activities, rapid rural appraisal, study tours, and cross visits for community empowerment; and study tours for marine park support.
- The GOI shall (a) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, prepare, under terms of reference satisfactory to the Bank and Association, (b) furnish on or about April 30, 2007, a report integrating the results of the monitoring and evaluation on the progress achieved in the carrying out of the Project during the period preceding the date of said report and setting out the measures recommended to ensure the efficient carrying out of the Project and the achievement of the objectives thereof during the period following such date; and (c) review with the Bank, by June 30, 2007, or such later date the report and take all measures required to ensure the efficient completion of the Project and the achievement of the objectives base on the conclusions and recommendations of the said report and the Bank's and Association's views on the matter.

## A. STRATEGIC CONTEXT AND RATIONALE

### 1. Country and sector issues

*Sector Importance.* Indonesia is the world's largest archipelago, containing at least 2.6 million hectares of coral reefs. This is roughly 25 percent of coral reefs in the region and 8 percent of the world's coral reefs. The Indonesian coastal and marine sector, and in particular the small-scale fisheries supported by coral reef ecosystems, is a significant productive asset for the country and the millions of poor fishers dependent on them. Healthy coral reef ecosystems can annually produce marine products worth on average US\$ 15,000 per square kilometer, and are an important source of food and livelihoods for roughly 9,969 coastal villages across the country.

*Government Sector Strategy.* The Government of Indonesia (GOI) identified coral reef ecosystem management as a national priority in the mid-1990s and as a result, requested the Bank's assistance to finance the first phase of a proposed three phase Adaptable Program Loan (APL) program, called the Coral Reef Rehabilitation and Management Program (COREMAP). Because of the importance of these coral reef ecosystems, the Government's current medium-term development strategy (*PROPENAS*) and the *Guidelines of State Policy (1999-2004)* support a coastal and marine sector policy which includes efficient and sustainable management of maritime resources, the rehabilitation of damaged coastal and marine ecosystems, and improvement of the socioeconomic conditions of coastal communities. Moreover, a new Ministry for Marine Affairs and Fisheries (MMAF) was established in 1999 with the mandate to ensure sustainable use of Indonesia's coastal ecosystems.

*Key Sector Issues and Institutional Constraints.* Despite prioritizing the health of coral reef ecosystems and aiming poverty reduction and income-generation activities at marginalized coastal villages, the Indonesian coastal and marine sector, and more specifically the small-scale coral reef fisheries sub-sector, is still beset with the dual constraints of pervasive poverty in coastal communities and extensive degradation of coastal resources. Currently, local government institutions lack the capacity to effectively work with communities to overcome these two sector constraints.

More specifically, over 53% of fisher families in the proposed program areas are poor and live below the poverty threshold of \$1/day. They are highly dependent on small-scale reef fishing for their livelihood, with many claiming that their income from fishing is not sufficient to meet even their basic subsistence needs. Moreover, with the country's economic crisis, poor land-based agricultural farmers have taken to the sea to fish as a last resort for own-consumption. Faced with these pressures, destructive and illegal fishing methods (cyanide and blast fishing) are often used in an attempt to increase fish catches. The result is that almost two-thirds (65%) of Indonesia's coral reefs are now considered threatened from over-fishing, and almost half are considered threatened specifically from destructive fishing practices. In the past 50 years, the proportion of degraded coral reefs in Indonesia has increased from 10 to 50 percent. As a result, many of the small-scale coral reef fisheries in Indonesia have reached a level and mode of exploitation where the only way to increase future production and local incomes is to protect critical coral reef habitats and reduce fishing effort. However, coastal fishing communities need help to make these behavioral changes. Currently capacity at the District level to assist coastal fishing communities to sustainably manage this important resource is limited. This is the major institutional constraint facing the sector to be addressed by the proposed program.

*Government Response to Key Sector Issues and Constraints.* GOI has begun to address these sector constraints through recent policy shifts towards decentralized coastal resource management focused on collaborative partnerships between communities and government, and the use of marine reserves and larger marine protected areas. A growing body of empirical evidence suggests that such marine reserves or 'no take zones' can rejuvenate depleted fish stocks in a matter of years and allow the coral reef ecosystems that support them to recover to healthy and productive levels. Based on this evidence, and

with support from the COREMAP APL, GOI has made a sectoral policy shift toward decentralized and collaboratively managed marine reserves (termed marine conservation areas (MCAs)) as an important tool in the sustainable management of coral reef ecosystems and the fisheries they support. There is now agreement across the relevant line Ministries (Ministry of Marine Affairs and Fisheries (MMAF), responsible for coordinating efforts in coastal waters outside of marine parks and the Ministry of Forestry, responsible under law for managing national marine parks) that the establishment of marine reserves within larger marine protected areas (MPAs), through a collaborative planning process with communities, will revive coral reef ecosystems and thereby rejuvenate small-scale reef fisheries, which will in turn, directly increase the welfare of these communities. This is now supported by a national strategic effort toward decentralized marine conservation areas management outside national parks, and building and strengthening co-management partnerships inside of national marine parks. COREMAP Phase II reflects this strategic effort by shifting overall program responsibility to the recently established MMAF and implementation responsibilities directly to the districts. Moreover, the advent of decentralization (law 22/1999) makes collaborative partnerships between District Governments and Communities possible.

## **2. Rationale for Bank Involvement**

*Rationale for Bank Involvement in the Sector.* Based on the importance of healthy coral reef ecosystems to the livelihoods of fishers living in 9,969 coastal villages in Indonesia (approximately 15% of all Indonesian villages), the coastal and marine sector, and more specifically, the small-scale coral reef fisheries sub-sector, clearly represents the nexus between poverty and environment. This nexus is one pillar of the World Bank's new rural development strategy, *Reaching the Rural Poor* (2002), providing a clear rationale for the Bank's continued involvement in the coastal and marine sector in Indonesia through the Coral Reef Rehabilitation and Management Program (COREMAP).

*Development Hypothesis for Bank Involvement in the Sector.* The proposed Program's development hypothesis, also reflected in GOI's recent policy shifts (see section A.1: Country and Sector Issues), is that in order to address this poverty-environment nexus in the coastal and marine sector, communities and local government institutions will have to collaborate to jointly identify and effectively co-manage marine reserves and larger marine protected areas. The Bank has played a critical role to this end. Through COREMAP Phase I, coral reef management systems were tested in pilot sites, with lessons learned contributing to this hypothesis. Moreover, these lessons emphasize the importance of placing the community at the center of coral reef ecosystem management (see Section B.4: Lessons Learned). In addition to COREMAP, the Bank has substantial experience in placing the community at the center of the development process, through the Kecamatan Development Project (KDP). Over the past five years, this project has focused on building participating villages' capacity for making choices regarding social capital improvements and on improving local level governance. Through adaptive learning, COREMAP Phase II builds on both the many lessons from Phase I and KDP village empowerment systems, and brings in a technical support context to further increase the development impact.

This overall development hypothesis has wider endorsement beyond Indonesia. At the World Summit on Sustainable Development (WSSD), countries around the world set a target to establish representative networks of marine protected areas by 2012. More recently, the G8 countries and the Bank in the May 2003 ministerial meetings in Evian, France concluded that "global sustainable development and poverty reduction requires healthier and more sustainably managed oceans and seas." The G8 and UN leaders promised to maintain the productivity and biodiversity of important and vulnerable marine and coastal areas. Moreover, the meeting stated that the "establishment of ecosystem networks of marine protected areas by 2012 in their own waters and other regions is a priority." The G8 and UN leaders also pledged to work with other countries to help them establish marine protected areas in their own waters.

*Donor Activities in the Sector.* The environment-poverty nexus in the coastal and marine sector in Indonesia is well recognized by the donor community. Since its inception, COREMAP has been

supported by multiple donors, including the Global Environment Facility (GEF), the Asian Development Bank (ADB), and the Australian Agency for International Development (AusAID), in addition to the Bank. Several donors (USAID and JICA), private sector organizations (Operation Wallacea) and a host of international, national and local NGOs directly and indirectly support the proposed COREMAP Phase II program and its objective of establishing collaboratively managed and sustainable coral reef ecosystem management systems. These partners are all very active in this sector and have helped to inform the proposed program design.

*Comparative Advantage of the Bank in the Sector.* In the coastal and marine sector, the World Bank has a comparative advantage in (i) policy dialogue: to facilitate the needed reform in the management of coral reef ecosystems; (ii) coordination: to enable collaboration between multiple donors to parallel and co-finance complementary activities; and (iii) convening power: to bring together stakeholders from community, district, province and national levels to reach consensus for resolving competing demands on coral reef ecosystem resources; and (iv) sustained commitment: to promote sector adjustments and policy reforms over the extended period of the COREMAP APL.

*Unique Contributions of The Bank's Involvement.* Through COREMAP, the Bank has demonstrated its capacity to bring together various stakeholders concerned with Indonesia's coral reefs and associated ecosystems, and the coastal communities dependent on them for their livelihood. The World Bank is uniquely positioned to engage with regional and international initiatives in coral reef ecosystem conservation such as that of IUCN's World Commission for Protected Areas (Marine). Furthermore, the Bank is currently involved in two international efforts that specifically complement the proposed Phase II program, namely the Marine Market Transformation Initiative (MMTI) which is collaborating with external partners in finding solutions for the live reef fish trade, one of the most significant threats to the health of Indonesia's coral reef ecosystems; and, (ii) the World Bank/GEF Global Program of Targeted Research and Capacity Building for Coral Reefs, which seeks to build networks of scientists from the developed and developing world to fill critical gaps in our knowledge about factors which determine resilience and vulnerability of reefs under various forms of stress. Together, the Bank and GEF are positioned to be seen as global leaders in knowledge development and program support of the coral reef conservation and sustainable use effort.

### **3. Higher Level Objectives to which the Program Contributes**

*Contribution to GOI's Sector and Poverty Objective.* This program significantly contributes to GOI's objectives of (i) sustainable utilization of the coastal ecosystem, (ii) decentralized natural resource management; and (iii) raising income levels and improving living standards in the coastal zone and on small islands, particularly in small-scale fishing communities, through marine reserves. Through collaborative management partnerships, Phase II will help to rejuvenate coral reef fisheries and diversify the livelihood opportunities of participating program fishing communities. This, in turn, will increase their income and living standards, thereby contributing to GOI's anti-poverty objectives.

*Contribution to the Objectives of the CAS.* The proposed Indonesia Country Assistance Strategy (CAS) sets the context for COREMAP Phase II by moving away from concepts like *protect the poor* to a focus on *empowering the poor*. With this focus, the new CAS seeks to address the core issue of governance in Indonesia, throughout all sector projects and programs, as well as achieve two objectives: (i) to improve the investment climate and (ii) to make service delivery responsive to the poor.

Based on lessons learned from Phase I, this second APL phase has been designed to reflect the emphasis placed on empowerment in the new CAS, with proposed activities aiming to empower vulnerable coral reef-dependent communities to sustainably co-manage their coral reef fisheries resources. Furthermore, Phase II seeks to directly address governance issues by (a) developing new methods to give a voice to these reef-dependent communities who are often excluded from development opportunities; (b) investing

in human capital development by supporting activities in community and local government capacity building with a strong emphasis on education; (c) assisting each of the 416 participating villages to create and sustain village financial management systems and train, accredit and elect a village financial manager and bookkeeper that is consistent with the law; and (d) promoting a participatory process by which reef-dependent communities themselves identify their development needs and are responsible for implementing a development plan, agreed upon by the community and supported through a collaborative management arrangement with District government. Such collaborative management arrangements provide an innovative way to improve the accountability of local government in their support services to poor coral reef dependent communities, within the context of the decentralization framework.

In addition to addressing the core issues of empowerment and governance in reef-dependent communities and their local governments, COREMAP Phase II indirectly contributes to the following CAS objective: creating income opportunities for poor households. Program affected peoples' incomes are expected to stabilize as a result of creating "fish banks" under this program (see Technical Annex 8: Economic and Financial Analysis). This second APL phase also seeks to mobilize traditional savings not currently utilized for productive activities through an extension of private business-oriented, faith-based savings and loans systems already operating in the program area.

Phase II will support the CAS objectives through the platform of community-driven development (plus), by empowering coastal villages and communities to collaborate with local government to sustainably co-manage and rehabilitate the fisheries resources, which will improve their livelihoods.

## **B. PROJECT DESCRIPTION**

### **1. Lending instrument**

*Program Lending Instrument and Basis for Selection.* This Project is the second phase of a fifteen year **Adaptable Program Loan (APL)**, a lending instrument which was selected because community-level interventions to enhance capacity for resource management and change behavior from destructive to sustainable practices require significant time and adjustment based on lessons learned over several phases. For this reason, the Government of Indonesia and the World Bank-Global Environment Facility are committed to a long-term program toward sustainable coral reef and associated ecosystem management.

*Long-Term Objective.* The long-term objective of the COREMAP APL is to establish a viable, operational, and institutionalized coral reef management system in priority coral reef sites in Indonesia.

*Overview of APL Program Phases.* Launched in May 1998, COREMAP is a fifteen year program financed by multiple donors and implemented over three phases to cover priority locations in ten provinces in Indonesia (South, North and Southeast Sulawesi, Riau, North and West Sumatra, Maluku, Papua/Irian Jaya, and East and West Nusa Tenggara). These three phases (and implementation periods) were originally envisaged as: (1) COREMAP Phase I: Initiation (1998-2001); (2) COREMAP Phase II: Acceleration (2001-2007); and, (3) COREMAP Phase III: Institutionalization (2007-2013). The program began by testing or 'initiating' coral reef management systems in four pilot sites, with the aim of generating lessons learned that would allow these pilots to be modified and 'accelerated' to cover a larger number of sites in Phase II, and to be operational and fully 'institutionalized' through Phase III. The first 'initiation' phase was much more ambitious and challenging than anticipated, resulting in three project extensions over a period from the original closing date of October 31, 2001 to June 31, 2004. In addition, since its inception, the political landscape of Indonesia has changed from strong central government authority to decentralization. As a result, the implementation time frame and institutional modalities have been adapted to these changes. The program phasing is now envisaged as: Phase I: Initiation (1998-2004), Phase II: Decentralization and Acceleration (2004-2009), Phase III: Institutionalization (2010-2015).

*Objectives, Basic Features, Estimated Costs, Duration, Phase II Locations, and Institutional Responsibilities for Each APL Phase.*

- The objective of **APL Phase I** Initiation (1998 – 2004); [Total Cost: US\$33.1 million, US\$6.9 million IBRD/IDA, US\$4.1 million GEF, US\$13.3 million Asian Development Bank and AusAID] is to establish a viable framework for a national coral reef system in Indonesia. This phase tested community-based coral reef ecosystem management pilots in priority sites and established the basis for a co-management framework for the COREMAP program. This initiation phase supported community-based ecosystem management and surveillance and enforcement activities in four pilot sites (Padaido Islands in Biak District, Papua Province; Taka Bone Rate National Marine Park in Selayar District, South Suluwesi Province, Riau, and Sikka/Gungua Palau Teluk Maumere Marine Park in NTT Province), as well as public awareness and policy reform activities at the national level. Phase I was executed by the Indonesian Institute for Sciences (LIPI).
- The objective of **APL Phase II: Decentralization and Acceleration** (2004 – 2009); [Total Cost: US\$74.6 million, US\$56.2 million IBRD/IDA and US\$7.5 million GEF] is that viable reef management systems are established in at least six priority Districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or preserve intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia. The second phase expands the number of program sites to build upon the pilots tested in Phase I, adjusting the process of implementation to reflect the results and lessons learned, in particular, promoting collaborative management partnerships between communities and local governments.

More specifically, the World Bank and Global Environment Facility will finance program activities in six eastern Indonesian districts in Phase II [(Selayar/South Suluwesi Province, Pangkajene Kepulauan/South Suluwesi Province, Buton/Southeast Suluwesi Province, Sikka/Nusa Tenggara Timur (NTT) Province, Biak/Papua Province, Raja Ampat/Papua Province) and each of the associated national/regional marine parks located in the same districts, namely, Padaido Marine Recreation Park in Biak District, Papua Province; Kapoposang Marine Recreational Park in Pangkajene Kepulauan District, South Sulawesi Province; Teluk Maumere Recreational Park in Sikka District, NTT Province; Raja Ampat Marine Wildlife Conservation Areas in Raja Ampat District, Papua Province; and National Marine Parks such as: Marine Nature Reserve and Marine Recreational Park P. Misol Selatan, Marine Wildlife Reserve P. Misol Selatan, Marine Wildlife Reserve P. Sayang, Marine Wildlife Reserve and Marine Recreational Park P. Koflau, Marine Wildlife Reserve Kep. Ajoë. ; the Asian Development Bank will finance a stand-alone project in western Indonesia in parallel to this APL, and AusAID will not finance any aspect of COREMAP due to a change in their policy of engagement in Indonesia (see Technical Annex 1: Country, Sector and Program Background). The recently established Ministry of Marine Affairs and Fisheries (MMAF) will be strengthened to coordinate the Program, with implementation occurring at each participating District. Research and Education activities will be coordinated by the Indonesian Institute for Sciences (LIPI), while program activities within national marine parks will be implemented through the park authorities under the jurisdiction of the Directorate General of Forest Protection and Nature Conservation (PHKA), within Ministry of Forestry.

- The objective of **APL Phase III** (2010 – 2015) [Total Cost: US\$85.0 million, US\$60.0 million IBRD/IDA] is to create viable reef management systems that are established in priority sites, operational, and fully decentralized to local governments and institutionalized. By the end of the third and final phase, the COREMAP program would be fully institutionalized at the National, Provincial, District and Community levels, with sustainability ensured through a combination of local government financing, specific block-grant transfers to local governments, and private sector financing. Phase III would continue to expand the program to other priority sites in eastern

Indonesia, with a focus on capacity building of the District Governments and Communities toward collaborative management under strengthened national coordination.

*Performance Triggers/Benchmarks for the APL Program and for Each Phase.* In the original specification of the COREMAP APL, key benchmarks were established to enable the Bank to assist the Indonesian government to prepare subsequent program phases (see Table B1: COREMAP APL At-A-Glance).

**Table B1: COREMAP APL At-A-Glance**

<b>COREMAP Program Phases</b>	<b>Phase I Initiation</b>	<b>Phase II Decentralization &amp; Acceleration</b>	<b>Phase III Institutionalization</b>
Years	1998-2004	2004 – 2009	2010-2015
Development Objective	Viable framework for a national coral reef system in Indonesia established.	Viable reef management systems established in at least six priority Districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or preserve intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia.	Viable reef management systems established in priority sites, operational, fully decentralized to regional governments and institutionalized.
Key Program Inputs	National program framework and pilot site management	Expansion of site management	Program institutionalization and full decentralization
Program Locations	Selayar district, S. Sulawesi province; Biak district, Papua province	Selayar and Pangkjene Kepulauan, S. Sulawesi; Buton, S.E. Sulawesi ; Sikka, NTT; Biak and Raja Ampat, Papua	To Be Determined
Benchmarks for Subsequent Adaptable Loan and Grant Financing	(1a) National COREMAP program strategy/policy discussed with key stakeholders; BAPPENAS Ministerial Letter issued, recommending strategy to involved agencies; COREMAP II sites designed in accordance with strategy (1b) Institutional capacity evaluated as sufficient to expand program (1c) Compliance rates > 10% in pilot sites (1d) Community-based management pilots evaluated as workable models (1e) 75% of outputs and disbursements reached; COREMAP I satisfactory	(2a) Satisfactory institutional capacity at provincial and district levels (2b) Compliance rates increasing (2c) Declining trends in mobile threats and destructive practices (2d) Coral reef plans implemented satisfactorily according to program indicators in > 60% of sites (2e) 75% of outputs and disbursements reached; COREMAP II satisfactory	(3a) COREMAP program strategy incorporated into national policy (3b) Site planning and implementation following program strategic priorities, and fully decentralized to regions (3c) Program sustainability ensured (e.g. through block grants to regional governments tied to local performance) (3d) At 75% of sites, coral reef management plans endorsed by local authorities and implemented satisfactorily by local communities according to program indicators

Based on a detailed assessment and review, an IUCN-led independent evaluation of the first phase (entitled *Independent Evaluation Report: Coral Reef Rehabilitation and Management Program (COREMAP) Phase I*) concluded that the above benchmarks for the first phase were sufficiently met, allowing for the Bank to assist in the preparation of the second phase. This conclusion was based on the development and establishment of a comprehensive framework and program of national policy, monitoring, control and surveillance (MCS), public awareness, information and monitoring; and research in support of coral reef management during Phase I, which could guide and assist in the implementation of Phase II. More specifically, the assessment indicated: (i) institutional capacity was sufficient to warrant expansion given the new context of decentralization; (ii) community-based management pilots were workable models and the lessons were incorporated into the design of Phase II; (iii) over 75 percent of the outputs and disbursements were reached; (iv) 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%; (v) greater public awareness of the importance of coral reef resource management was generated; and (vi) stronger political will for coastal resource management and poverty reduction existed at all levels of government.

*Adaptive Learning Through COREMAP APL.* The COREMAP APL represents the first time any developing country has initiated a program of such scale to target the sustainable management of coral reefs and associated ecosystems. For this reason, Phase I was designed to *test* approaches in several pilot sites, in order to generate lessons learned to inform the design of an expanded number of priority coral reef sites in Phases II and III. As such, Phase I generated a wealth of information and experiences which are reflected in the design of Phase II (see Section B.4: Lessons Learned). In addition to adapting the design of Phase II to reflect these lessons learned, significant institutional developments have taken place in Indonesia over the course of Phase I, in the form of decentralization. Decentralization has created an opportunity to adapt the approach for coral reef ecosystem management in Phase II, placing greater emphasis on local government implementation and community responsibility than was originally envisaged at the outset of the APL. As a result, the national strategic framework for coral reef management in Indonesia is one of *collaborative management or co-management*, where communities are legally empowered to collaborate with local governments to sustainably manage coral reefs and associated ecosystems for which they are dependent on for their livelihood.

## **2. Project (Phase II) Development Objective and Key Indicators**

The **development objective** of COREMAP Phase II is that viable reef management systems are established in at least six priority Districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or preserve intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia. This means changing the behavior of coastal communities from destructive to sustainable use practices.

In order to meet this development objective, Phase II activities focus on achieving three key groups of **outcomes**, with several key indicators for each: (a) improved awareness, empowerment and sustainable management of coral reef ecosystems in program sites (management and empowerment indicators); (b) improved health of coral reef ecosystems (including replenishment of coral reef fish and invertebrates) in program sites (biophysical indicators); and (c) enhanced community welfare (i.e. community development and economic diversification) of coastal communities in program sites (socio-economic/poverty indicators).

The key **indicators** for measuring the success of Phase II activities toward achieving these three groups of outcomes are (see Annex 3: Results Monitoring Framework):

(a) management and empowerment indicators:

- fully protected marine conservation areas ('no take zones') established and covering 10% of target district reefs by 2010;
- financial sustainability of ongoing coral reef management activities at the end of Phase II; and
- public awareness about the importance of coral reefs increased in all program districts;

(b) biophysical indicators:

- increased live coral cover (keystone indicator among a basket of additional reef health indicators); and
- increased catch per unit effort of key reef fish and invertebrates from baseline;

(c) socio-economic and poverty indicators:

- income and living standards in target coastal communities greater than non-program sites and pre-program conditions; and
- perceptions of fishers/beneficiaries in program districts of the impact of the program on their welfare and economic status.

### 3. Project (Phase II) Components

COREMAP Phase II will support the following components, sub-components, and activities (with *total costs* in millions of U.S. Dollars in parenthesis). Objectives of each sub-component and detailed descriptions of each activity identified below are found in Technical Annex 4: Detailed Description.

**(A) Institutional Strengthening (\$17.1m—total costs including contingencies).** The objective of this component is to enhance government institutional responsiveness to meet the needs of coastal communities, in support of collaborative management of marine reserves and other marine protected areas.

This component will provide technical assistance, human resource development, and legal input to support a paradigm shift from centralized to local management of coral reefs and associated ecosystems enabled by laws U.U. 22/99 and 25/99 and in accordance with KMK 35. It strengthens decentralized and collaborative management of coral reefs and associated ecosystems.

This component would support the following sub-components and key activities/outputs: **(1) Program Coordination, M&E, and Training (\$8.7m):** (i) support for the National Coordination Unit (NCU); (ii) support for national monitoring, evaluation, and feedback of program activities; (iii) support for training coordination and national level workshops and training during the first 3 years of Phase II; (iv) training to enhance management capacity of PMUs and coordination between NCU and PMUs, (v) identification of 6 additional Districts for Phase III participation; **(2) Coral Reef Research and Monitoring--CRITC (\$7.9m):** (i) national CRITC support; (ii) district reef health monitoring; (iii) district fisheries monitoring; (iv) socio-economic data collected, analyzed and disseminated; (v) support for local research; (vi) innovative grants; and (vii) coral reef education support; **(3) Legal, Policy and Strategy Assistance (\$0.5m):** (i) support to legalize program structures, (ii) technical assistance to NCU for national policy assistance, (iii) technical assistance to Districts to assist the creation and implementation of enabling legislation (*perdas*), technical assistance to communities to assist in the creation and implementation of enabling legislation (*perdes*); (iv) enhancement and dissemination of the National Coral Reef Management Strategy developed under Phase I; (v) development and dissemination of a Regional Coral

Reef Management Strategy and a Sustainable Reef Fisheries Management Strategy; and (vi) support for live reef fish trade (LRFT) policies, strategies and proposed program.

**(B) Community Based and Collaborative Management (\$44.1m).** The objective of this component is to empower all coastal communities and institutions throughout program districts to sustainably co-manage coral reefs and associated ecosystems to increase incomes, which will in turn enhance community welfare.

In Phase II districts, coral reef resources (i.e. fisheries) comprise one of the largest sources of potential revenue and food security available to coastal communities and local governments. Through replacing short-term exploitative practices with long-term sustainable economic benefits, communities and local governments can drive the development process, thereby reducing dependence on central government finance. For these reasons, this component will empower 416 coastal communities in the first six districts to manage extensive and bio-diverse coral reef ecosystems in a cost-effective and sustainable way. Particularly, young and capable people both within communities, as facilitators and within government will be empowered to drive this behavioral change.

The component would support the following sub-components and key activities/outputs: **(1) Community Empowerment (\$15.7m):** (i) sustainable coral reef fisheries training; (ii) social marketing of sustainable coral reef management, Program and rapid rural appraisal; (iii) community study tours and cross visits; (iv) village facilitation and technical assistance; (v) establishment of village coral reef information centers; and (vi) communication networks such as two-way radios; **(2) Community-Based Coral Reef Management (\$7.4m):** (i) detailed participatory village resource assessments and mapping; (ii) preparation of scientifically supported village Coral Reef Management Plans and inter-village plans legalized by *perdes*; (iii) establishment of village sanctuaries supporting district sustainable reef management plan; (iv) inventory of fishers, vessels, gear and holding facilities and development of fisheries management; (v) pilot decommissioning of destructive fishing gears in selected villages; (vi) on-going community monitoring of reefs and associated ecosystems; (vii) collaborative surveillance and enforcement (MCS); and (viii) strengthen and expand community based management areas; **(3) Community Development (\$9.0m):** (i) establish and operate village financial management system to manage public funds; (ii) technical support to BMT/LKM (or similar micro finance institution) to establish village branches in participating villages; (iii) support revolving credit/savings facilities in each participating village for livelihood and income generation activities; (iv) technical support to review, revise and implement proposed income generation activities; (v) block grants for village improvements; and (vi) provision of income opportunities outside program villages; and (vii) block grants to districts to support small and medium size enterprises **(4) District Marine Conservation Area Management (\$7.8m):** (i) support to formally establish and maintain District Coastal Community Empowerment Boards and Sub-District Committees; (ii) establish District Program Management Units to support co-management; (iii) develop District Marine Resources Strategic Plan and establish a protected areas network; and (iv) establish sustainable management of certified live reef species trade in two pilot areas, Spermonde islands and Buton; **(5) Marine Park Support (\$4.2m):** (i) strengthen PHKA capacity to support co-management of marine protected areas, (ii) learning exchanges between marine park managers; and (iii) strengthen national marine park and KSDA co-management, including (a) training, (b) technology support, (c) collaborative enforcement support, and (d) national park/KSDA management plans reviewed, revised, and socialized using participatory techniques.

**(C) Public Awareness, Education and Sea Partnership (\$13.0m).** The objective of this component is to promote societal awareness to the benefits of coral reef ecosystem conservation and sustainable use that leads to behavioral change.

This component aims to address the knowledge gap in Indonesia of the benefits of sustainable coral reef management and thereby support the realization of behavioral change. Toward this end, Phase II will seek to empower children and youth through an education and scholarship program that will assist in moving

away from reef destructive behavior, key stakeholders through advocacy, local government and communities through technical assistance and awareness campaigns.

The component would support the following sub-components and key activities/outputs: **(1) Public Awareness Campaigns (\$3.3m):** (i) support to reproduce and disseminate existing successful materials (phase one, donor, NGO) to program provinces, districts and villages; (ii) create, produce and disseminate new materials supporting co-management and its reef-fisheries benefits to program provinces, districts and villages; (iii) establish and operate national, provincial, district and village awareness and advocacy programs; (iv) support to independent journalists and media; **(2) Education Programs (\$4.2m):** (i) develop and produce coral reef education materials for inclusion into the formal primary and secondary education curriculum in each program district; (ii) program district teacher training; (iii) national reef education events for children and youth; **(3) Sea Partnership Program (\$5.3m):** (i) establish and support National Sea Partnership office; (ii) deploy advisory group expertise; (iii) university faculty seconded and placed in districts to support program activities; (iv) secondary, university and graduate scholarships and post-education placement to support program activities; (v) creation of “think tanks” for responsive research at 5 universities/research centers; and (vi) expansion of existing practical field training program to support village-based program activities; **(4) Program Support Communication (\$0.2m):** (i) phase two communication protocols (vision, logos, branding, letterhead); (ii) media training for key program representatives; (iii) internal communication system; (iv) info-sheets and newsletters; and (v) public relations to generate a clear and common understanding of phase two program to targeted audiences.

*Basis for Selection of (Phase II) Program Components & Key Sector Issues Addressed.* The second phase program components were selected in order to assist the Government of Indonesia to address the two key sector issues identified in A.1: (i) the pervasive poverty in coastal communities; and (ii) the extensive degradation of coastal resources, particularly coral reef ecosystems. The Community-Based and Collaborative Management (CBM) component (and supporting sub-components in the program’s design) is the heart of the program’s efforts to address these key sector issues. It absorbs roughly sixty percent of the program’s resources (see Annex 5: Program Costs). The CBM component will advance the key strategy of the government to assist rural coastal communities to implement effective and fully-protected marine conservation area management in coral reef ecosystems, which would both increase the welfare of these communities and remedy the degradation of the coastal resource base. For this component to be effective, government institutions will need to be strengthened, through the Institutional Strengthening component. This component coordinates and provides decentralized support to rural coastal communities in program sites. Similarly, resource users and decision-makers at all levels need to be educated in collaborative coral reef ecosystem management. For this reason, the second phase program will be supported by a Public Awareness, Education and Sea Partnership component.

### **3. Lessons Learned and Reflected in the Program (Phase II) Design**

This second phase program directly reflects the lessons learned from Bank-financed operations such as COREMAP Phase I, Kecamatan Development Project, Kerinci Seblat Integrated Coastal Development Project and the Bank’s ongoing analytic work on key themes such as Governance/Anti-Corruption, and Decentralization. The design also reflects innovations from a multitude of non-Bank financed projects and programs.

First, as the second phase of an adaptable program loan, this program is designed from the 60-plus lessons learned from *COREMAP Phase I*, as identified in the IUCN-led Independent Evaluation entitled *Independent Evaluation Report: Coral Reef Rehabilitation and Management Program (COREMAP) Phase I*. This evaluation suggests that the limited geographical coverage of Phase I resulted in limited impacts on altering coral reef use patterns throughout the region, and improving institutional effectiveness to coordinate coral reef management. These results have been attributed to: (i) the inherent complexity of coral reef management and poverty reduction, particularly at the initial stages of such initiatives; (ii)

limited resources available for community-based management and alternative income-generating activities; (iii) the lack of a supportive legal framework and weak enforcement of regulations; (iv) fragmented field implementation due to lack of cohesiveness between financing agencies and Project components; (v) the lack of a strategic approach and capacity in local government agencies to meet their enhanced role under the Law 22/1999 for management of inshore marine resources; and (vi) inadequate provision of basic social services and few tangible returns to poor coastal communities. Key lessons from phase one that have been included into the design of the second phase include: (a) communities should be placed at the center of coral reef ecosystem management; (b) coral reef ecosystem management is most likely to be sustainable when local governments form partnerships with coastal communities (i.e. collaborative management); (c) collaborative coral reef ecosystem management is a *process*, and must be implemented as such, rather than in a compartmentalized or fragmented approach focused on individual components; and (d) as a result of the 1999 laws (laws 22 and 25) supporting decentralization, district governments should be charged with program implementation, with coordination and support from national government.

This conclusion by the Phase I Independent Evaluation that program implementation for Phase II should be decentralized was supported by the **OED Project Performance Assessment Report (PPAR) of COREMAP Phase I** completed in January 2004. The PPAR noted (see para. 50, pg. 13) that extensive delays between community-level decisions and responses from the centralized project management in Jakarta were the most important source of complaints recorded in the evaluation of Phase I. As stated in the PPAR, the decentralized design for decision-making and approvals in COREMAP Phase II is expected to resolve this problem.

In addition, the second phase program also benefits from experiences from the Bank-financed ***Kecamatan Development Project*** (KDP) in Indonesia. Specifically, *Community Empowerment* is now the first step in the process towards introducing collaborative management in program sites, and energizing the coastal communities to work together to find solutions to local resource management problems. Furthermore, funds will be transferred directly to the communities to support the community side of collaborative management initiatives, based on the example set by KDP.

The poor performance of the recently completed Bank-GEF financed ***Kerinci Seblat ICDP*** in Indonesia was due in large part to a lack of capacity and institutional constraints in the park management authority. For this reason, COREMAP Phase II has allocated a specific, but integrated sub-component designed to strengthen the national marine park management authorities link to District government in program sites. Similar to COREMAP Phase I, Kerinci Seblat ICDP suffered from a lack of integration between components and implementing institutions.

The in-depth analytic work around **anti-corruption issues** in Indonesia [*Anti-Corruption Guide: Developing and Anti-Corruption Program for Reducing Fiduciary Risks for New Projects. Lessons from Indonesia; Fighting Corruption in KDP; Fiduciary Management for Community-Driven Development Projects: A Reference Guide; INDONESIA: Corruption in Indonesia, A development Perspective*] forms the basis of the program's Anti-Corruption Strategy (see Technical Annex 7). More specifically, the second phase program will develop transparent and accountable village-based financial management systems to allow funds to be disbursed directly to communities.

The second phase also incorporates several key innovations outside of Bank programs. Information was collected from a wide range of sources, including: ***Decentralized and Community driven Natural Resources Management initiatives*** currently being undertaken in Indonesia and South East Asia. These initiatives include lessons from the USAID supported Coastal Resources Management Projects in Philippines and Indonesia; ***Multi-donor initiatives in resource management and community participation*** in East Kalimantan, North Sulawesi, Lampung and Papua, UNESCO initiatives in Jakarta Bay, ***International NGO conservation initiatives*** in Komodo, Bali, Philippines and The Federated States of Micronesia and Fiji (World Wide Fund for Nature, The Nature Conservancy, Locally Managed Marine

Area Network, *International Maritime Alliance, Marine Aquarium Council*); **Initiatives in legal reform** led by the International Centre for Environmental Law, Transparency International, Indonesian Corruption Watch and Oxfam.

The management tools promoted by the proposed Program are in line with international consensus, COP V (South Africa) and the September 2003 G8 + UN Resolution calling for sustainable marine resource management through marine protected areas.

#### 4. Alternatives Considered and Reasons for Rejection

*Alternative Approaches Considered.* The following alternative approaches were considered and rejected:

- **Top-down only: Centralized Program Implementation.** The Program considered maintaining a Program Management Office (PMO) and all key implementation responsibilities at the *National* level. However, in light of the Government's directive and policy shift towards decentralization and based on Phase I lessons learned, the approach for Phase II emphasizes national coordination (through a National Coordination Unit--NCU), with program implementation responsibilities at the *District* level (in Program Management Units--PMUs). Moreover, in line with the Ministry of Finance directive *KMK 35, 2003* any program implemented with the support of foreign loans, must be initiated by a program design originating from the district government, that is approved by both District Head (Bupati) and District Parliament (DPRD) bodies.
- **Bottom-up only: Community-based Program Implementation.** The Program also considered bottom-up approaches that emphasized placing all responsibilities for coral reef ecosystem management with coastal communities. However, lessons from Phase I, as well as good practices and experiences throughout East Asia and the Pacific Islands, have shown that for some key functions of coral reef ecosystem management, such as the legal authority to manage, monitoring ecosystem health, and support in reducing destructive fishing, communities *do* need help from external partners, generally local government. For this reason, the Phase II Program's approach aims to establish a *common ground* between solely top-down or bottom-up approaches, by establishing partnerships between coastal communities and local government, to enable the two partners to *collaboratively* manage the associated coral reef ecosystems.

### C. IMPLEMENTATION

#### 1. Partnership Arrangements

Although several donors funded individual but complementary program components in COREMAP Phase I (see Section A.2.), in the second phase, the Asian Development Bank (ADB) will finance Program activities in western Indonesia as a stand-alone project, while The World Bank and the Global Environment Facility (GEF) will finance all program activities in eastern Indonesia as well as a public awareness campaign. Both ADB project and Bank-GEF program, however, fall under the national COREMAP umbrella and are coordinated by the National Coordination Unit (NCU) in the Ministry for Marine Affairs and Fisheries and by BAPPENAS.

#### 2. Institutional and Implementation Arrangements

COREMAP is a nationally coordinated and decentralized program in implementation.

*National Level Responsibilities.* The Ministry of Marine Affairs and Fisheries (MMAF) is the Program's Executing Agency (EA). On 5 February 2003, the MMAF Minister issued a decision letter [Surat

Keputusan (SK)] No. KEP.03/MEN/2003 with endorsement from eight other Ministries and line agencies outlining the national institutional structure for Program coordination and implementation. This SK defines structures and duties as well as assigning government officers to positions. A National Steering Committee (NSC), National Technical Committee (NTC) and National Coordination Unit (NCU) are formed, which are responsible to the MMAF Minister reporting through the Director General, Coasts and Small Islands (DGCSI), MMAF. These national committees provide oversight, technical advice and national coordination support to COREMAP Phase II, respectively.

*National and Regional Marine Parks Authority.* National marine parks in Indonesia have unique authority/status under decentralization. First of all, even though they fall under the institutional authority of the Ministry of Forestry, they are allowed to solicit and receive funds directly from outside sources and use those funds to manage the national marine park, which are located at the District level. In Phase II, 2 national marine parks and 4 regional parks (KSDA) will participate. The Ministry of Forestry will have qualified staff supported by full time junior technical staff working in the NCU as an Assistant Director, and there will be specific budget earmarked at the national level for support of the 2 national parks (each of which will have a *pimbagpro* to access these funds). Each of the KSDAs have full time representation to the District PMU, which have a separate budget for KSDA park management activities through a Pinlak or Pemegang Uang Muka Kerja (PUMK) to access these funds (and subject to yearly evaluation).

*Provincial Level Responsibilities.* The Provinces will play a facilitating and coordination role and will not be directly responsible for implementation. Provincial functions will focus on (a) monitoring, evaluation and feedback, (b) strengthening district government capacity through technical support, training and workshops, (c) public awareness support, (d) control and surveillance support, (e) developing provincial strategic plans for coral reef rehabilitation and management and based on the district plans, (f) developing local government regulations (*perdas*) to deal with destructive activities, (g) coordination of Navy and Police in line with COREMAP Phase II objectives, and (h) registering fishing vessels from 10-30 Death Weight Tons (DWT).

*District & Sub-District Level Responsibilities.* In each District, a Coastal Community Empowerment Board (CCE Board) will be created through a *Bupati* SK and after demonstrated to be effective, it is encouraged to be legalized through a District Government Regulation (*perda*). CCE Board-mandated activities include: (a) oversight, (b) conflict resolution, and (c) review and endorsement of annual implementation plans. The detailed program planning, implementation, and evaluation will be executed by a District Program Management Unit (PMU), comprising of key local institutions. The proposed institutional location of each District PMU is as follows: Dinas DKP (Buton, Pangkep, Raja Ampat, Selayar and Sikka), Bappeda (Biak). Each PMU is responsible for program management and procurement for district activities. Each PMU has a full-time procurement and financial management capacity-building technical assistance consultant. Sub-District Coastal Management Coordination Committees (CMC Committees) for productive and conservation activities will be established as deemed necessary by the districts.

*Village Level Responsibilities.* Approximately 416 villages are likely to participate in Phase II implementation in six districts. Each village will be empowered through local ordinances to co-manage the coral reefs and associated ecosystems. Village institutions established under the program include: (a) financial management system for transparent and accountable record-keeping for all program funds earmarked to the village, including trained, certified and elected village financial manager and an assistant/bookkeeper, (b) village reef watchers to collaboratively enforce village rules governing the village sanctuary and ensure no destructive fishing takes place, (c) faith-based savings and loans institution linked to already established BMTs/LKMs or equivalent institutional and accountability set-up for income generation groups, and (d) formal coral reef education program for children and youth.

*Implementation of Components.* The NCU in MMAF will be responsible for coordinating the implementation of Component A: Institutional Strengthening, although individual NCU member

institutions will more directly implement and/or coordinate various sub-components. (e.g. LIPI will be responsible for coordinating the Coral Reef Research and Monitoring sub-component). The 6 District PMUs, National Marine Parks/KSDAs and approximately 416 Communities will be responsible for the implementation of Component B: Community-Based and Collaborative Management, across program Districts. Finally, MMAF and LIPI will be jointly responsible for oversight and coordinating the implementation of Component C: Public Awareness, Education and Sea Partnership. MMAF will take the lead on Public Awareness and Sea Partnership. LIPI will take the lead in coordinating and implementing with the districts the Education sub-component.

*Flow of Funds & Reporting.* Funds will flow in accordance with the provisions set forth under Kepmen 35/2003 (KMK 35) – Regional Government Projects/Programs, that sets the framework for regional borrowing and grant financing. Under KMK35, the terms of the financing depend on the fiscal capacity of the receiving kabupaten which are categorized as low, medium or high. It is proposed that COREMAP Phase II will operate in three designated low and three designated medium fiscal capacity kabupaten in eastern Indonesia. The KMK mechanism is an interim mechanism developed by the Ministry of Finance, as they progress towards developing a meaningful intergovernmental fiscal management/transfer framework for a newly decentralized environment.

Under the provisions of KMK 35, the investments proposed for COREMAP Phase II are non-revenue generating, and hence do not attract cost-recovery provisions; project funds would therefore be transferred to local governments as a grant. Local Governments would, however, be required to contribute counterpart financing in accordance with the provisions of KMK 35 (10 percent for low and 40 percent for medium fiscal capacity). Provision has been made to ensure that those three districts designated as medium capacity are only required to provide 10 percent counterpart funds, with GEF-grant resources contributing to their remaining obligation under KMK35 (see Annex 9: Incremental Cost Analysis).

Generally, Bank-GEF funds will flow directly from the Bank Indonesia (BI) Special Account and through Bank Indonesia to a local bank where funds will be held to support the relevant national government institutions, district governments, and villages responsible for implementing specific components, sub-components and activities financed by the second phase program (See Technical Annex 6B).

At the **National** level, funds will flow from the World Bank to a Special Account for COREMAP Phase II established in Bank Indonesia (BI) to a BI Branch bank account established to support activities of the national coordinating agency, MMAF-DGCSI to support activities of the NCU. In addition, funds will flow directly from a BI Branch bank account established to support other agencies represented in the NCU for them to coordinate and implement those activities for which they will be directly responsible. For example, funds will flow directly to LIPI to operate the National Coral Reef Information Training Center. Financial reporting is the responsibility of the NCU's Project Manager (*Pimpro*) in MMAF, in conjunction with the Coordinator for Monitoring, Evaluation and Feedback, and the Project Manager in the PIU in LIPI.

According to design, **Provincial Government** plays a facilitating and coordination role and will not be directly responsible for implementation. A system has been designed by each district to request provincial skills on demand. This has been approved in principle by each province. Funds to support Provincial coordination and their activities will come through the NCU, and particularly, MMAF/DKP.

At the **District** level, Phase II funds will flow from the BI Special Account through a National BI Branch to a local Bank at the District used to implement activities at the district level. The second phase program will support a district financial management specialist consultant in each PMU to advise on all financial and procurement arrangements made at the district and village levels. Financial reporting is the responsibility of the District Program Manager in the PMU. Quality control and review is the

responsibility of the NCU. This supports the overall approach of the second phase program: a nationally coordinated, but decentralized program in implementation.

At the **Village** level, funds will flow from the National Special Account through the National BI Branch to a local Bank account established for each participating village in order to support community income generation and co-management activities, and village mapping exercises. Financial reporting is the responsibility of each program trained village financial management system head with oversight from the PMU.

### 3. Monitoring and Evaluation of Outcomes/Results

The data for the second phase program's three key groups of outcomes and accompanying results indicators will come from different sources, depending on the specific outcome of interest (see Section B.2. for second phase program outcomes).

- For the *management and empowerment results* indicators, the Phase II program will finance a monitoring and evaluation sub-component which will build the capacity for the National Coordination Unit (NCU) and PMUs to evaluate and document management effectiveness, as well as the National Marine Parks, and for the Community Facilitators (CFs) and Senior Extension and Training Officers (SETOs) to report on village-based management indicators.
- For the *biophysical results* indicators, the Phase II program will finance the establishment of district reef health monitoring teams in each program district, with the capacity to collect and analyze biophysical indicator data for coral reef ecosystem health, based in part on data collected by village fisheries monitoring groups.
- For the *socioeconomic and poverty* indicators, the Phase II program will finance household surveys across selected participating program villages conducted by village facilitators and experts in survey methods. Moreover, the National *Susenas* and Census data will be analyzed to reflect changes in a range of socio-economic indicators of participating and non-participating villages.

The final repository for all results indicators is the National Coordination Unit's Results-Based Monitoring, Evaluation and Feedback Unit, which will report regularly to the Bank. However, all relevant information for each District will be posted at the PMU and for each Village at the program-financed village coral reef information centers. Capacity building efforts will include on the job training for the relevant staff of the NCU, PIU, PMUs, district monitoring teams, and communities involved in program implementation. A baseline for each indicator will be in place by the end of the first year of program implementation for the purpose of M&E.

The mechanisms that will allow the indicators to be used by managers and policy-makers to assess the program's effectiveness during implementation and after the second phase program is completed is as follows:

- **Management and Empowerment** indicators. The management indicators will be collected from the PMUs and summarized by the NCU on an annual basis. An annual report will be used to disseminate key results.
- **Biophysical** indicators. The district reef health monitoring teams will analyze, summarize and disseminate the results from reef surveys and community-based monitoring to the NCU, PMUs and program extension teams on a regular basis. This data will inform the designation of marine reserves and guide their ongoing management by informing communities and stakeholders on the status of coral reef ecosystem health and the improvements, if any, in the coral reef fisheries. The district reef

health monitoring teams will also distribute these results to the National Marine Park/KSDA Authorities, in order to inform marine park management.

- **Socio-economic and Poverty** indicators. Qualitative and quantitative data will be collected and analyzed with the assistance of the PMUs and district monitoring teams, and sent to the NCU for inclusion in annual program reports. Analysis of census data would be the responsibility of the PMU.

#### 4. Sustainability

The issue of sustainability is examined from the perspective of institutions, policies, finance, and partnerships. Institutional changes, supportive policies, finance arrangements, and key partnerships formed at each level (national, district and local) are all necessary to ensure sustainability of the reefs and of this program. This is not easy to achieve. An *incentive-based* approach to sustainability is mainstreamed throughout the program, with the assumption that unless the program identifies appropriate incentives for all stakeholders to conserve coral reefs and associated ecosystems, it is unlikely to find much success.

- **Institutions.** Collaborative management of the reefs (a legal agreement between local government and coastal resource dependent communities, giving responsibility to these communities to manage reef resource areas with the commitment of local government responsiveness to their needs in this endeavor) through reserves is the pillar of COREMAP Phase II. While their incentives for doing so vary, all key institutions (National, District, and Community-Based) subscribe to this.
- **Policies.** A Ministerial Decree issued by Ministry of Forestry and a Memorandum of Understanding (MOU) between Directorate General of Forest Protection and Nature Conservation, Ministry of Forestry and Directorate of Coasts and Small Islands, Ministry of Marine Affairs and Fisheries makes collaborative management the key mechanism with which to manage coral reefs and associated ecosystems. Regulations will be formulated at the village (*perdes*) and District (*perdas*) in support of marine reserves and collaborative management. Moreover, the Fisheries Law (UU no. 9/1985), and The Conservation of Living Resources and their Ecosystems Act (UU No. 5/1990), includes a key Act on Coral Reef Conservation, as well as related existing *Perdas* that do not allow destructive fishing practices to be carried out.
- **Finance.** Through implementation, the financing share contributed by Districts toward coral reef conservation will increase, with the Bank-financed share proportionally decreasing. A similar decrease in the Bank's financing share exists as the program progresses to the third phase. Specifically, the Bank-GEF will finance the initial capital costs of collaborative coral reef ecosystem management in each program district (e.g. village public infrastructure, monitoring and enforcement infrastructure, initial costs of promoting alternative livelihoods to fishing and economic diversification in coastal communities). Moreover, District governments will cover an increasing share of the recurrent and operational costs. Many of the supported activities are scheduled to be completed before the completion of Phase II of COREMAP, with all remaining components targeted to be affordable within existing District level finance. The Bank will assist them in identifying permanent budget structures to finance post-program activities and identify other permanent funding mechanisms.
- **Partnerships.** COREMAP cannot protect all of Indonesia's important coral reef ecosystems alone. The program needs the help of global, regional, and local partners to achieve the program's mission. The program will work with development banks, bi-lateral donors, national and local governments, civil society groups, communities, the private sector and research institutions. This program creates the national framework in which all partners can work together (in terms of resource mobilization and

knowledge sharing) and toward achieving the program’s overall objective. Fortunately, there are many partner organizations already working together in preparing the second phase program.

## 5. Critical risks and possible controversial aspects

Risks	Risk Mitigation Measures	Risk Rating with Mitigation
<i>To program development objective</i>		
Risk that program activities are <u>unable to change behavior</u> of coastal communities from destructive to sustainable coral reef use practices;	Based on lessons learned from Phase I and good practices around the world, the program will provide significant amounts of technical assistance for facilitation, extension, consultation, legal support, education, and awareness raising activities.	M
Risk of poor coordination between donors, and therefore donor-financed consultants, leading to poor program management, coordination and performance.	The Bank-GEF will finance District Program sites in eastern Indonesia and ADB in western Indonesia as the equivalent of a stand-alone operations. NCU established for national coordination and harmonization of Bank and ADB-financed COREMAP projects; Districts responsible for implementation.	N
Inherent fiduciary risks arising from weaknesses in country control environment and financial accountability systems.	Continue country dialogue to expedite public financial management reforms and introduce project specific measures such as enhanced financial reporting and additional payment validation procedures.	S
<i>To component results</i>		
<b>A. Institutional Strengthening.</b> Risk of inadequate coordination between national marine park authorities and district government in program sites leading to fragmented implementation that fails to provide communities with the services that they need to sustainably co-manage coral reef ecosystems.	Establishment of a District CCE Board (in sub-component 4 of Component B) and Chaired by the Bupati (invitations are sent from the Bupati’s Office) that includes marine park authority and local government representatives (served by the PMU) to ensure coordination and resolve any conflicts that might arise with respect to issues of jurisdiction. Full time National Park representation in PMU.	M
<b>B. Community-Based and Collaborative Management.</b> Risk of a lack of interest, buy-in or willing participation by one or more communities in program districts to	Intensive public awareness and education campaigns; empowering communities to opt-in to program rather than participation due to program pre-selection; providing real benefit to	N

<p>communities in program districts to sustainably manage coral reef ecosystems.</p> <p><b>C. Public Awareness, Education and Extension.</b> Due to national level implementation, risk that awareness materials: (i) do not reach target audiences; (ii) do not adequately address local needs; (iii) do not adequately or appropriately present the monitoring data collected by the district monitoring teams.</p> <p><b>Financial management Risks</b> arising from weak internal control systems and payment validation procedures.</p>	<p>communities to encourage participation.</p> <p>Establishment of Public Awareness capacity at each PMU, providing materials and technical support for the program’s Public Awareness and Education components. District PA TA will work closely with LIPI and the NCU, to ensure program extension teams have appropriate and effective awareness and education materials.</p> <p>Community disclosure and oversight mechanisms and more intensive payment validation procedures.</p>	<p>N</p> <p>S</p>
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## 6. Loan/Credit/Grant Conditions and Covenants

### Negotiations:

- Establishment of NCU in MMAF, PIU in LIPI and PMUs in six proposed districts and appointment of qualified staff (including a qualified project manager in NCU, PIU and PMUs) in accordance with the institutional structure agreed to in the DPIP.s.
- Adoption by NCU, PIU, and PMUs of Environmental and Social Impact Management Framework (ESIMF) and Governance/Anti-Corruption Strategy, satisfactory to the Bank.
- Completion of draft Operational Manuals (Financial Management/Procurement Manual and CBM Manual), satisfactory to the Bank.
- Completion of the Terms of Reference (ToR) for procurement and financial management capacity building consultants, audit of project financial statements review firm, community facilitators and senior extension training officers, all other technical assistant consultants, satisfactory to the Bank.

### Loan/credit effectiveness:

- Project financial management consultants to be selected based on TORs approved by the Bank.
- All Implementation Manuals (CBM, Collaborative Enforcement, Research and Monitoring Protocols) adopted by NCU and participating District PMUs and the NPIU.
- The Borrower provide to the Association evidence, acceptable to the Association, that each Participating Province and each Participating District has taken the necessary measures for prohibiting and enforcing destructive fishing practices in such Participating Province and such Participating Districts.

### Covenants applicable to program implementation:

- The Government of Indonesia (GOI) shall maintain until completion of the Project the National Coordination Unit with adequate funds and other resources and staffed by qualified and experienced personnel including a NCU Director; an Executive Secretary; a Program Manager

assisted by personnel from the Ministry of Marine Affairs and Fisheries, LIPI, and from the Directorate General of Forest Protection and Nature Conservation.

- The GOI shall maintain until completion of the Project the National Program Implementation Unit in LIPI, the National Coral Reef Information and Training Center, and the National Monitoring, Evaluation and Feedback Unit with adequate funds and other resources and staffed by qualified and experienced personnel.
- The Districts shall maintain until completion of the Project a Program Management Unit, with adequate funds and other resources and staffed by qualified and experienced personnel including a Director, an Executive Secretary, a Program Manager, a representative from the Dinas KP from such Participating District, and a representative from the National Marine Park or marine protected area in such Participating District.
- By June 30, 2005, the Districts shall establish a Coastal Community Empowerment Board, with representatives from the GOI and from civil society.
- By June 30, 2005, the Districts shall establish until completion of the Project a District Coral Reef Information and Training Center with adequate funds and other resources and staffed by qualified and experienced personnel.
- The GOI shall adopt and apply in the implementation of the Project, the Project Management Manual.
- By June 1, 2008, the GOI shall establish an independent evaluation panel and cause such independent panel to carry out an evaluation of the Project by not later than March 1, 2009; and furnish the results of the evaluation to the Bank and Association for comments.
- The GOI shall take all measures necessary to ensure that any development project proposed to be carried in shall only be carried if a satisfactory environmental study of said proposed project shall have been completed and established that any potential adverse effect on the Project site will be avoided or mitigated.
- The GOI shall make Grants available to Participating Villages up to an aggregate amount not to exceed Rp. 10,000,000 and ensure that the works are carried out in accordance with the provisions of the Agreement and the provisions of the Village Grant Guidelines.
- The GOI shall make Grants available to a Participating Village up to an aggregate amount not to exceed Rp. 50,000,000 and the adoption of a village plan for alternative income generation activities in accordance with the provisions of the Village Grant Guidelines; and ensure that a Subsidiary Loan Agreement, is entered into between the relevant Participating Village and the selected village financial institution.
- The GOI shall make Grants available to a Participating Village up to an aggregate amount not to exceed Rp. 50,000,000 upon the adoption by such Participating Village of a draft coral reef management plan; and ensure that the Sub-projects are carried out in accordance with the provisions of the Agreement and the provisions of the Village Grant Guidelines.
- The selected Sub-project by a Participating Village shall qualify as eligible for financing out of the proceeds of the Credit and the Loan only if the Sub-project is an investment project, is technically, socially and environmentally viable, and has been designed in accordance with the criteria and procedures set forth in the Village Grant Guidelines, and the Sub-project proposal has been publicly discussed among, and agreed to by, the villagers in the Participating Village under the coordination of the LKMD.
- The Sub-project selected by a Participating District shall qualify as eligible for financing out of the proceeds of the Credit and the Loan only if the Sub-project is an investment project, is technically, socially and environmentally viable, and has been designed in accordance with the criteria and procedures set forth in the District Grant Guidelines.
- The GOI, in accordance with its commitment to the protection of the interests of Isolated Vulnerable People shall (a) take measures to protect customary user rights of Isolated Vulnerable People; (b) ensure that the benefits received by the Isolated Vulnerable People under the Project are in harmony with their economic, social and cultural preferences; (c) through a process of informed participation, to involve concerned Isolated Vulnerable People in the design and

implementation of coral reef management plans; and (d) mitigate or avoid adverse effects on Isolated Vulnerable People caused or likely to be caused by the Project.

- By November 30, 2006, the GOI shall furnish the Bank and Association for comments a draft plan for the establishment and implementation of the partial credit guarantee program, including the description of specific policies and procedures for the program, and the reporting requirements and accounting procedures for the banking institution selected for the guarantee reserve account.
- Not later than January 1 in each year, commencing January 1, 2005, the GOI shall provide recommendations of the studies carried out in the preceding year and not later than July 31 in each year, commencing July 31, 2005, prepare action plans for the implementation of the recommendations of the studies and the Bank's and Association's recommendations carried out in the preceding year, and carry out each of such action plans.
- The GOI shall carry out with a training plan, the trainings, workshops, awareness activities, rapid rural appraisal, study tours, and cross visits for community empowerment; and study tours for marine park support.
- The GOI shall (a) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, prepare, under terms of reference satisfactory to the Bank and Association, (b) furnish on or about April 30, 2007, a report integrating the results of the monitoring and evaluation on the progress achieved in the carrying out of the Project during the period preceding the date of said report and setting out the measures recommended to ensure the efficient carrying out of the Project and the achievement of the objectives thereof during the period following such date; and (c) review with the Bank, by June 30, 2007, or such later date the report and take all measures required to ensure the efficient completion of the Project and the achievement of the objectives base on the conclusions and recommendations of the said report and the Bank's and Association's views on the matter.

## D. APPRAISAL SUMMARY

### 1. Economic and Financial Analyses

**Poverty-Environment Nexus.** Indonesia's coral reefs form the key ecosystem on which about 9,969 coastal and island villages rely for food, income generation, construction materials, coastal protection and other economic activities. They are also of critical significance for science, education, pharmaceuticals, global conservation, heritage and tourism. Healthy reefs can produce marine products worth \$15,000/km<sup>2</sup>/yr, and have a tourism value estimated at \$3,000/km<sup>2</sup>/yr in low potential areas to \$500,000/km<sup>2</sup>/yr in high potential sites. These economic and financial benefits have been the source of Indonesia's drive to revive coral reefs and associated ecosystems through COREMAP.

COREMAP Phase II seeks to place 4,725 square kilometers of coral reef in 6 eastern Indonesian districts, 2 national marine parks and at least 6 regional marine parks (under 4 regional marine park authorities) under sustainable community-driven collaborative management by 2009. This constitutes 9.2% of the country's total coral reef area and over 60% of the Indonesian coral reefs currently under threat from destructive practices considered by coral reef scientists as still worth 'saving'. Not only does the program seek to revive coral reefs and thereby rejuvenate the small-scale fishery that live on or around them, but in doing so, will improve the lives of approximately 125,000 fishers (approximately 21% of the total population in the six program districts and over 50% of whom are considered subsistence fishers and poor) and their families dependent on the coral reef fisheries for their livelihood by at least \$3/day from the time the coral reef ecosystem is stabilized. By stabilizing and/or rejuvenating the fishery, approximately 70,000 poor fishers, and their average per capita income per day will increase by approximately \$0.23, thereby rising over the \$1/day per capita poverty threshold.

**Economic Analysis:** [NPV @ 10% over 25 years is US\$15.6m per District; EIRR = 18%]

*Cost Benefit Analysis (CBA)* was carried out for the phase two program, based on actual data collected from each of the six program districts and given the unique conditions of the coral reefs such as their current productivity levels. The CBA at the district level captures the following three main quantifiable benefits: (i) benefits from improved fisheries, (ii) benefits from local products derived from sustainable coral reef activities and (iii) associated ecosystem use (including recreation and tourism). Program benefits are carried forward 25 years, which is the evaluation time horizon for the analysis. Significant benefits are expected to come from the fisheries sector: the voluntary closure of reef areas by communities is expected to stabilize reef fish yields compared to the 'without project' scenario where yields are expected to gradually decline over time (see figure D1 below). The graphs give both a central case as well as a more optimistic and a more pessimistic case, to mimic the uncertainties regarding the benefits of no-take zones. The overall results from the COREMAP CBA is presented in Table D1. The quantifiable economic internal rates of return range from 8% in Sikka district to 22% in Raja Ampat district. The differences can largely be explained from the relative size and health of the reefs in the different districts. While the EIRR for Sikka could be considered low, the inclusion of this district in the program is important since migratory fishers from Sikka are partly responsible for destructive practices in Selayar and Buton, and therefore directly affect the financial viability in these two second phase locations.

*Table D1: Economic Rates of Return for the 6 Project Districts ('central' estimate)*

	Pangkap	Selayar	Buton	Raja Ampat	Biak	Sikka
EIRR 'central' (%)	13	20	20	22	13	8

*Sensitivity and Risk Analysis.* These estimates are rather sensitive to the assumptions (an extensive discussion of the assumptions used in this analysis is presented in Technical Annex 9: Financial and Economic Analysis), especially those related to trends in fish yields over time. If the co-managed no-take zones are less effective, (e.g. because of continued illegal and destructive fishing practices in these areas), the EIRRs decline significantly, which highlights the importance of collaborative enforcement of the no-take zones. Over 125,000 fishers in the program area (6 districts) are involved in reef-related fishing and are among the Program's key stakeholders. Under the program, their incomes will stabilize as compared to the 'without project' case, where incomes are decreasing every year, with a 50% or more drop assumed over the next 25 years 'without' this program.

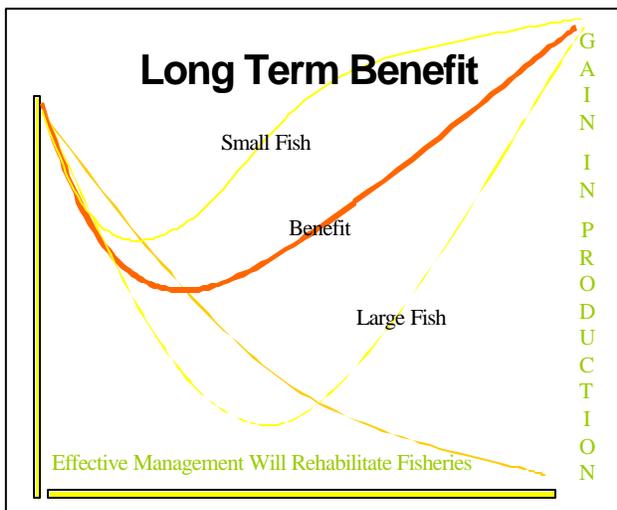
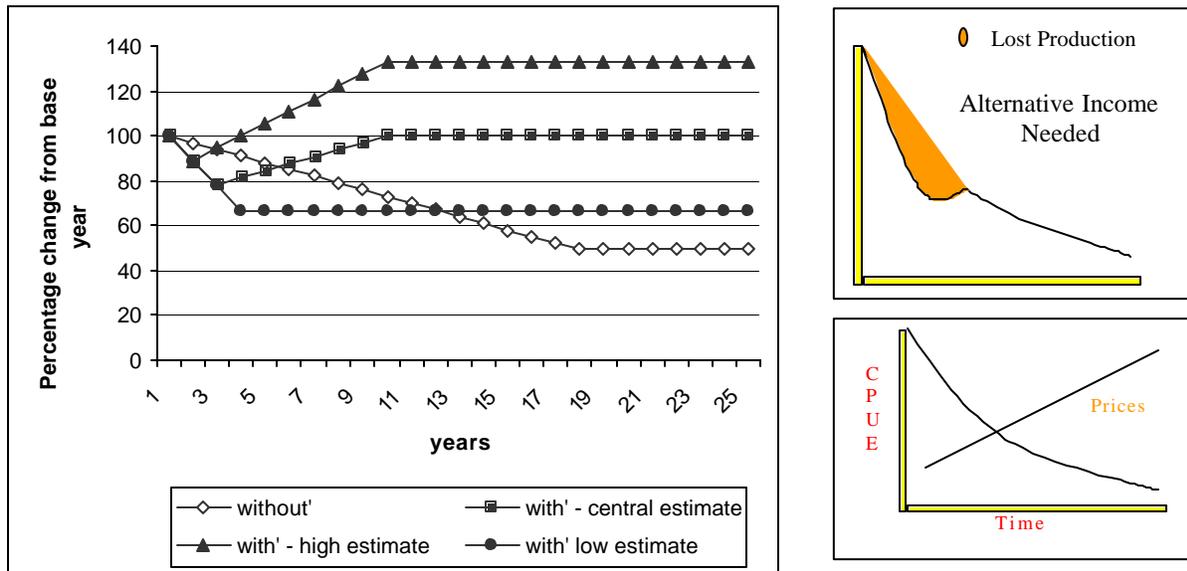
*Table D2: Economic Rates of Return for the 6 Project Districts ('central' estimate and sensitivity)*

	Pangkap	Selayar	Buton	Raja Ampat	Biak	Sikka
EIRR 'central' (%)	13	20	20	22	13	8
EIRR high (%)	25	44	40	51	26	16
EIRR low (%)	undefined	undefined	4	1	undefined	undefined

**Financial Analysis:** [NPV @ 10% over 25 years is US\$28,000 per village; FIRR = 29%]

A detailed financial analysis was carried out for alternative income generation micro-enterprises likely to be supported under the program. The financial analysis estimated requirements for: (i) capital investment and working capital; (ii) profit and loss statement; and (iii) financial planning cash flow. The financial rates of return range from 16 to 59 percent, with 29 percent for a representative package of micro-enterprise investments (i.e. cold storage facilities, small-scale fish culture, seaweed farming, mud crab fattening, grouper cage culture, etc.). When risk factors over and beyond normal business risk were added, the switching values - the values for which the FRR equals the opportunity cost of capital - were obtained at a 15 percent decrease in revenues and at a 70 percent increase in investment costs.

**Table D3:** Fisheries benefits assumed in economic analysis and associated loss of production over first several years due to closures.



**Catch-per-unit-Effort (CPUE)**  
*The Profitability of the Reef Fisheries*  
 CPUE measures the fish harvested per unit of fishing effort, i.e. the costs a fisher or group of fishers will incur to harvest an amount of fish for wholesale or consumption. The more overexploited the reef fishery, the more effort (and costs) a fisher will have to expend to capture a dwindling amount (and returns) of fish. However, reducing pressure on the fisheries and allowing fish stocks to recover can help to increase CPUE, increasing the profitability of the fishery and incomes of the fishers.

## 2. Technical

The Program’s approach emphasizes decentralized implementation and collaborative (or co-management) partnerships between coastal communities and local governments, for the purpose of empowering these communities to sustainably manage their associated coral reef ecosystems, particularly through establishment of marine reserves.

The wisdom of this approach was confirmed by the Independent Evaluation of Phase I, as well as by numerous experiences and good practices from around the world, including examples from India, the Philippines and Samoa as summarized in the draft World Bank *Fisheries Approach Paper* (2003). Furthermore, the impact of collaboratively managed and fully-protected marine reserves and larger marine protected areas in replenishing fish populations and protecting coral reef ecosystems is well documented. It is also the centerpiece of GOI's strategy for the coastal and marine sector.

Scientific evidence suggests that such marine reserves help to replenish adjacent fishing areas in coral reef ecosystems in two ways: (i) by increasing health and quantity of broodstock, leading to increased larvae availability and survival, and (ii) by larval and adult export to surrounding areas enhancing neighboring fisheries. One particular study examined the various characteristics of 76 marine reserves, established between two and twenty years. The study found that on average, abundance of fish stocks (measured in density) approximately doubled, biomass increased to 2.5 times the biomass of nearby fished areas, average fish body sizes increased by approximately one third, and the number of species present per sample increased by one third [(Halpern (2002) in Roberts et al, 2001)].

Based on experiences in various marine reserves around the world, scientists recommend that marine reserves are most effective in increasing the long-term yields of over-exploited fish species when they cover approximately 20 to 40 percent of fishing area (Roberts et al, 2001). These principles have been taken into account in the preparation of the second phase of COREMAP, and as a result, GOI has set an ambitious target of placing ten percent of each participating District's coral reef ecosystem areas under full protection as marine reserves that are collaboratively managed by resource dependent coastal communities by 2010, twenty percent by 2020, and thirty percent by 2030.

### **3. Fiduciary: Financial Management and Disbursement**

A financial management assessment of this project was carried out between May and October 2003 and has involved an assessment of financial management capacity at the key implementing agencies and an evaluation of the adequacy of financial management arrangements proposed for the project, including accounting systems for project expenditures and underlying internal controls (see project files for Financial Management Capacity Assessment and Procurement Capacity Assessment).

Recent Bank experience in other projects executed by the several Ministries and a consideration of the Country Financial Accountability Assessment report suggest that financial management capacity at these central agencies is likely to be generally low. Further, a significant part of the project expenditure will be managed and accounted for at the district governments and by the communities at village levels. In districts, there is an even greater shortage of financial management skills, and financial management systems are generally weaker than at the center. Villagers are not expected to have financial management skills.

An analysis of project specific risks indicates that substantial risks may arise from several other features. Overall, the project will be influenced to some degree by the weak overall control environment in the country, as diagnosed by the Country Financial Accountability Assessment completed in April 2001. Since the completion of that report, progress on country financial management reforms have been slow. The lead execution agency (MMAF) has prior experience in managing Bank projects. Risks arise from geographical spread of PMUs and use of multiple agencies and community organizations. The geographical spread of project activities to over 400 villages and inherently weak and variable financial management capacity in the regions imposes substantial risks on financial accounting and reporting. Community based management comprises a significant 40% of project expenditure, and will financial management of these will present challenges. Validation of payments is traditionally a weak area and vulnerable to malfeasance and fraud.

Based on these factors financial management risks inherent in the project entity and risks specific to project design have been rated as **substantial**. Several measures have been designed to mitigate these risks. These include deployment of trained financial management consultants in villages and districts to assist in the preparation of project financial statements and more intensive payment validation procedures, including community disclosure and oversight mechanisms where applicable. A series of these measures and other operating authorities and procedures for each project activity are expected to be clearly documented in the Project Management Manual and Technical Annex 7: Anti-Corruption Action Plan. Financial Monitoring reports have been prescribed for reporting purposes. Full details of these measures are given in Technical Annexes 6A, 6B, and 7.

Funds for the project are expected to be channeled through a Special Account opened for the purpose. Fund flows for community based management activities under this project will utilize ‘force account’ mechanisms developed for other decentralized projects. Disbursements into these accounts will be made through Special Account procedures by central treasury offices. Replenishments will be based on traditional simpler Statements of Expenditure (SOE) initially. Once capacity and track record has been established to issue reliable quarterly FMRs, FMR-based disbursements will be introduced.

#### 4. Social

There are many opportunities for the program to accomplish its objectives arising from the current socio-cultural and political context. First, in terms of the socio-cultural context, the program targets those coastal communities dependent on the coral reef ecosystem for their livelihood. Therefore the program beneficiaries have a key incentive to achieve sustainable management of coral reefs and the small scale fisheries they support. Second, in terms of the political context, the new Coasts and Small Islands Act currently being prepared for legal adoption recognizes *adat* (customary) systems of coastal resource management. Both assist communities to effectively collaboratively manage the coral reefs.

However, there are many risks and constraints to the program arising from the socio-cultural context too, including: (i) pervasive poverty in coastal areas, (ii) destructive practices such as reef bombing and cyanide poisoning, due to limited economic opportunities and public awareness to the impact of such practices in remote sites; (iii) dependence on the “boss” system for credit; (iv) dependence on traders and middlemen for marketing products; (v) limited capacity of local communities to enforce user rights against external fishers; (vi) limited capacity of village financial management institutions to manage and implement field activities; (vii) ethnic and cultural heterogeneity among resident fishing populations in several proposed sites (Buginese and Bajo communities); (viii) conflicting demands on the same resources – potential for internal conflict within and between neighboring communities on access to limited reef resources. Each of these challenges has been analyzed and approaches designed on experience to maximize the possibility for these issues to be addressed and overcome.

*Participation of Key Stakeholders in Program Preparation.* This program was prepared based on a highly participatory and consultative process that occurred in several stages throughout the design phase. **First**, the GOI Preparation and Consultant Teams conducted District consultations on the proposed Phase II program in each participating District. Moreover, consultations were conducted in the provincial capitals of Makasaar, Kendari, and Jayapura. In total, over 350 stakeholders participated in discussions for which minutes were recorded and prepared as a volume for the Bank’s review. These stakeholders included District Executives and their staff, Local legislature (DPRD) head and faction leaders, District government agencies (Dinas) including fisheries (Dinas DKP), planning (BAPPEDA), forestry and others, Non-government organizations (NGO’s), National and other parks authorities; the private sector and other related parties (i.e., communities, Bank Rakyat Indonesia, etc.).

**Second**, a team of facilitators conducted a participatory design workshop in each of the COREMAP Phase II districts. Each of the six pre-selected program districts formed a COREMAP Phase II design

team, by order of *SK Bupati* (District Executive decree), comprising of relevant government departments, NGO and the private sector. These teams invited participants from coastal and island communities, village heads, BPD members, fishers, women, *Camats*, local and International NGO's and the private sector to guide the development of the COREMAP Phase II program and organize the district government departments for the workshops. Each of the six three-day workshops involved between 50 and 70 active participants approximately half from coastal communities and half from government services, NGO's, local Universities or the private sector. 25 members of the National Design team participated in at least one of the workshops as resource persons. The workshops were completed between March 24-April 12, 2003. Based on the input from the workshops, the results of the first consultation visit, the socio-economic survey and other available literature, draft Program Implementation Plans were prepared for each District and consultations around these PIPs are on-going.

**Third**, a final round of consultations occurred in each of the six districts to discuss the draft PIPs, and finalize them for DPRD approval, and MOF-BAPPENAS and Bank Appraisal.

*Participation of Key Stakeholders in Program Implementation.* This is a community-driven development type program, and therefore communities are at its center. As highlighted in the Critical Risks Matrix (see section C.5), without community engagement Phase II will not succeed. Over 500,000 coastal inhabitants in 416 villages are envisaged to participate in the first three years of this program, with special activities designed to target vulnerable groups (e.g. widows, indigenous peoples such as Bajo, etc.). They are the key stakeholders. These key stakeholders will be integral partners in creating collaboratively managed marine reserves, participating in the identification, design, mapping, management and enforcement of these reserves, and in collecting data to monitor coral reef ecosystem health.

*Indigenous People in Phase II Locations.* Since the provisions of the World Bank's indigenous peoples policy apply to COREMAP Phase II in its entirety, the preparation process has closely followed the policy's strategy that issues pertaining to indigenous peoples must be addressed based on informed participation of the indigenous people themselves. The preparation process for COREMAP II centered around a series of participatory stakeholder consultations throughout the six districts where Phase II will be implemented, in order to ensure participation of indigenous peoples in the design. Furthermore, a detailed social assessment of indigenous ethnic minorities in Phase II districts (entitled *Developing Ethnic Specific Strategies for Marine Conservation and Coastal Resource Management: Assessing Local Capacity in Relation to the Bajo Peoples of Buton, Southeast Sulawesi* available in the Program Files) was conducted during this preparation process. Approximately 8,000 Bajo will benefit from the Program in Buton District and another 1,600 households in the remaining five districts (see Technical Annex 10: Safeguards: Indigenous Peoples Assessment) for more detail.

*Monitoring of Social Impacts.* The Research and Monitoring (CRITC) sub-component is designed to monitor and measure the program's main social impacts, through: (i) regular surveys of stakeholder perceptions of the program's performance and impact; (ii) poverty and socioeconomic assessments, and (iii) analysis of National SUSENAS and other national data. District monitoring teams and program extension teams will work with key stakeholders to collect these data and the indicators for social impacts and social development outcomes. All summary evaluations will be posted in each village's coral reef information center as well as at each District and at the NCU (COREMAP website) to allow the key stakeholders to track the program's progress towards meeting its intended outcomes.

## 5. Environmental

Because the Program aims to implement a process that empowers coastal communities in targeted districts to sustainably co-manage coral reef ecosystems, in part through the establishment of an institutional framework in each district for decentralized resource management, most of the activities are expected to have benign, if not positive, impacts on the environment. These environmental benefits will

be monitored through program sub-components focused on monitoring and evaluation, and the regularly collected scientific data on coral reef health. The impacts of improved and transparent coral reef ecosystem management on livelihoods in coastal communities will be monitored through these sub-components as well.

## 6. Safeguard policies

Safeguard Policies applicable to COREMAP Phase II:

<u><i>Safeguard Policy</i></u>	<u><i>Applicability</i></u>
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	Yes
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	Yes
Forestry (OP 4.36, GP 4.36)	No
Pest Management (OP 4.09)	No
Cultural Property (OPN 11.03)	No
Indigenous Peoples (OD 4.20)	Yes
Involuntary Resettlement (OP/BP 4.12)	No
Safety of Dams (OP 4.37, BP 4.37)	No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	No

Safeguard Screening Category: S2

Environmental Screening Category: B

*Key Safeguard Policy Issues.* While the safeguard policies listed above apply to the Program, they will not necessarily be triggered. These safeguard policies may be triggered in the case of site-specific, community-determined micro-projects that will be designed throughout the course of program implementation. As these micro-projects have not yet been determined, COREMAP Phase II has prepared an Environmental and Social Impact Management Framework to guide program staff to assist communities in the design of micro-projects. This Framework includes criteria that automatically prohibits involuntary land acquisition (see Technical Annex 10: Safeguards-Guidelines for Voluntary Land and Asset Acquisition), and hence involuntary resettlement, using program funds, and provides a process for determining whether proposed micro-projects trigger any of the above safeguards. If triggered, the Framework includes a process by which the NCU and PMUs would design Terms of Reference for an independent EA consultant to assist communities to conduct an Environmental Impact Assessment of proposed micro-projects triggering any of the above safeguards applicable to the program, and to assist these communities to create an Environmental Management Plan to mitigate any adverse environmental impacts, prior to the approval of micro-projects for funding. The PMUs will have technical specialists funded by the Program, with the capacity to implement the Environmental and Social Impact Management Framework and assist communities and Community Facilitators in this process.

The Environmental and Social Impact Management Framework was designed based on the feedback and consultations from the District and Village stakeholder consultations conducted in each Program District in the preparation of COREMAP Phase II. The Framework was made available by the National Coordination Unit in the Ministry of Marine Affairs and Fisheries on October 2, 2003, and to the InfoShop on December 15, 2003.

## 7. Policy Exceptions and Readiness

The proposed project requires no exceptions from Bank policies.

- Counterpart funds budgeted/release requirements were confirmed during negotiations;

- Operational Manual/Financial Management Manual and Community Based and Collaborative Management Manual were prepared in draft and endorsed by GOI prior to negotiations and confirmed by the Bank at negotiations;
- The first 1.5 year procurement plan was prepared by GOI and confirmed by the Bank at Negotiations; and
- All Safeguard documents (Environment and Social Impact Mitigation Framework) related to the program were prepared and formally endorsed by GOI prior to negotiations, and reviewed and confirmed by the Bank at negotiations.

## Technical Annex 1: Country, Sector and Program Background

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### Country and Sector Background

Indonesia is the world's largest archipelagic nation with more than 13,000 islands and an 81,000 kilometer (km) coastline rich in coral reefs, seagrasses and mangroves. The nation has a marine area of 5.8 million square kilometers (km<sup>2</sup>), comprising 3.1 million km<sup>2</sup> of territorial and archipelagic seas and 2.7 million km<sup>2</sup> of exclusive economic zone (EEZ). In contrast, its land mass occupies an area equivalent to only a third of its sea space (i.e., 1.9 million km<sup>2</sup>). Indonesian seas are a center of global biodiversity containing over 2,500 species of mollusks, 2,000 species of crustaceans, 6 species of sea turtles, 30 marine mammal species and over 2,000 fish species. Coral reefs are extensive covering 25,695 km<sup>2</sup> equivalent to about 10% of the world's coral reef area<sup>1</sup>. Indonesia is also the coral biodiversity center of the world with about 70 genera and 450 species of corals<sup>2</sup>.

Largely due to their breeding and nursery functions, coral reef and associated ecosystem health has a direct impact on fisheries production. Fisheries are clearly important to the nation's social and economic well being. The total product of coastal and marine economic activities is estimated at 15 percent of Indonesia's gross domestic product (GDP), providing employment for about 28.5 million people. In addition, about 75 percent of the nation's population, equivalent to 140 million people, live within 60 km of the sea; and, consequently, are at least indirectly effected by the coastal environment. Since coral reefs are habitats for about 90 percent of the fish caught by coastal fishers and since fish compose about 60% of the average Indonesian's animal protein intake, coral reef health is especially crucial to support basic nutrition, health and community welfare.

Despite the importance of coral reef ecosystems to Indonesia's economy, environment and biodiversity, unfortunately these resources have not been managed sustainably. Resource exploitation has led to extensive coastal resource degradation, primarily through the destruction of coral reefs and associated seagrass and mangrove ecosystems, depletion of fish stocks, water pollution and biodiversity loss. Coral reefs are deteriorating rapidly, mainly because of intensive human activities such as over fishing, sedimentation, coral mining, blast and cyanide fishing and pollution. Since 1994, global warming and associated coral bleaching, plus increased reliance on coastal fishing, have further damaged the nation's reefs. The coastal environment has been further affected by land-based activities. Watershed deforestation and erosion have led to increased sedimentation on fringing coral reefs. Industrial and urban wastes and runoff containing chemicals and pesticides from agricultural land have polluted coastal waters.

All these stresses impair the ecological capacity of coral reefs to serve as nursery and breeding grounds for marine aquatic resources. Surveys conducted in 2000 by the Program's Coral Reef Information and Training Center (CRITC) found that less than 30 percent of the nation's corals remain in good condition. The urgent management interventions begun under COREMAP Phase I continue to be warranted.

The impact of marine resource loss on human populations can be severe. Coral reef degradation, accompanied by over-fishing, has depleted fisheries resources in many areas. Serious reduction of fisheries resources can be found along the coasts of Sumatra, North Java, and the straits of Malacca and Makassar. However, although declines in fisheries yields can be documented for these areas, resource depletion is probably not limited to these regions alone. A COREMAP Phase I study in the Program area of Kabupaten Sikka also demonstrated very low fish populations near coral reefs, due for the most part to

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<sup>1</sup> Landsat 7 data consolidated by the PHRD Preparation Team.

<sup>2</sup> Veron. C. 1995. Corals of the Indo-Pacific.

over exploitation. Such degradation limits income from marine resources and constrains coastal communities from improving their economic well being.

Coral reef degradation and environmental problems in the coastal zone have affected the livelihoods of coastal people, particularly small scale (artisanal) fishers. Artisanal fishing is the occupation of last resort for many poor people due to population growth, decreased availability of farmland and uncontrolled access to fisheries resources. Consequently, the number of coastal fishers has increased by more than 50 percent over the past decade. Because of a deteriorating fisheries resource base, fish catch per unit of effort has been steadily declining, often adversely affecting incomes. The average income of coastal fishers is below the national average level. Various studies show that coastal fishing communities are among the poorest segments of society in the country. They often lack access to basic social infrastructure such as clean water, sanitation, health care, roads, and transportation. Fishers and their families also have difficulty improving their living standards due to limited access to any form of credit or savings.

Despite the gravity of the situation, the government actions prior to 1998 were limited. This was due in part to responsibility for the sector divided amongst at least five major government agencies ministries (fisheries, forestry, environment, police, navy). In addition, the most directly effected ministry, fisheries, was very much focused on increasing capture fishery production.

### **Sector Constraints and Client Actions to Address Constraints**

**Government Policies:** Beginning in 1999, the situation began to change with Indonesia embarking on a series of major reforms of social, political and economic policies. To effect these reforms, government processes and institutions were significantly revised. Strategic priorities now emphasize national unity; macroeconomic policies to support economic recovery, poverty reduction, agricultural and rural development; and support for small and medium-size enterprises, decentralization and good governance. State Policy Guidelines for 1999-2004 states that natural resources should be managed to insure that their carrying capacity is preserved for the welfare of present and future generations and to protect biodiversity. These guidelines require enabling legislation to provide for the delegation of authority for managing natural resources to the local level. They also give special attention to the empowerment of local communities, traditional institutions and non-government organizations (NGOs) for natural resources management.

Recognizing the potential of marine resources, the Government has established marine resource management as a priority area. The Government created the Ministry of Marine Affairs and Fisheries (MMAF) in 1999, with a vision to place the sea at the center of the nation's future. MMAF's mandate covers: (i) efficient and sustainable management of maritime resources; (ii) rehabilitation of damaged coastal and marine ecosystems; (iii) sustainable development of coastal zone and territorial waters through improved spatial planning; (iv) improvement of resource databases and modernization of information and data exchange and dissemination facilities; (v) improvement of the socio-economic conditions of coastal communities; and (vi) promotion of the maritime concept to the public and other stakeholders. MMAF was structured to fulfill its policy mandate. A directorate was specifically created to concentrate on the implementation of coastal and small island policies. This directorate contains divisions for spatial planning, conservation, community empowerment and small island development. The Indonesian Institute of Sciences (LIPI) retains the mandate for both technical and socio-economic coral reef research and related data gathering and dissemination.

Under COREMAP Phase I, a National Policy and Strategy for Coral Reef Management in Indonesia (National Policy and Strategy) was prepared. The National Policy and Strategy was developed through a broad based public consultation process, which included two national and seven provincial level workshops. In 2002 national policy and strategy documentation was disseminated to all major stakeholders. The National Policy and Strategy is designed to guide the management of coral reefs for conservation and sustainable use nationwide. It seeks to: (i) balance intensity and different uses with the

carrying capacity of the environment; (ii) develop management systems which involve all parties to consider national economic priorities, local communities and the conservation of coral reef resources; (iii) implement formal and informal regulations; and (iv) create incentives for equitable and balanced management. The policy is a recent initiative and its impact to date is limited. COREMAP Phase II will continue to promote and develop the National Policy and Strategy further at national, regional and local community levels. The Program will also seek to harmonize national and local policies and strategies with relevant international initiatives.

A framework of national strategies was drawn up to implement the policies. These strategies focus on: (i) empowering coastal communities to manage coral reef ecosystems; (ii) reducing the rate of coral reef degradation; (iii) managing coral reefs on an ecosystem basis in consideration of their utilization potential, legal status and coastal community's wisdom; (iv) formulating and coordinating action programs of government agencies, private sector, and communities; and (v) strengthening the commitment of all parties to implement management of coral reefs through capacity building, awareness raising, and strengthening the legal environment. COREMAP Phase II design is based on this strategic framework. It is envisaged that the Program will be the principal vehicle for planning, organizing, and coordinating the plans envisaged under the National Policy and Strategy.

**Legal Environment.** The Indonesian Constitution requires that natural resources be managed to achieve the greatest possible benefit for the people. A number of laws relevant to coral reef ecosystems have been passed by the national legislature (DPR). The three primary laws are: (i) Fisheries Act No. 9 of 1985; (ii) Conservation of Living Resources and their Ecosystems Act No. 5 of 1990; and the (iii) Forestry Act No. 41 of 1999. Other important laws include: (i) Spatial Planning Act UU No. 24/1992; and (ii) Environmental Management Act No. 23 of 1997. In addition, Indonesia is a signatory to a number of international declarations on natural resources and environmental management, and has issued laws ratifying some of these declarations. These include: (i) the Convention on International Trade in Endangered Species; (ii) UN Convention of the Law of the Sea (UNCLOS) (1982); (iii) International Maritime Organization laws on marine pollution (1969, 1971, 1989); (iv) the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities; and (v) the Global Convention on Biological Diversity (1992). These agreements have been supplemented by regulations setting out basic sector policies on mining, fisheries, forestry, and environment.

The Regional Autonomy Act No. 22 of 1999 (Act No. 22/99) provides a new dimension to the legal framework for natural resources planning. Act No. 22/99 aims to decentralize most government services. For example, it devolves responsibility for marine and coastal resources within Indonesia's territorial waters to regional governments. As stated in Act No. 22/99, districts are granted control over waters stretching from the shoreline to 4 nautical miles (nm) offshore, provinces from 4 to 12 nm offshore and the national government for waters more than 12 nm distant from shore. Furthermore, districts may authorize smaller local units (e.g., villages) to exercise authority over the adjacent sea space within the district waters. Act No. 22/99 thus provides incentives to local governments for sustainable management of natural resources within their respective jurisdictions. These new responsibilities require drafting of new legislation as well as revision of some existing laws and regulations.

There are, in addition, customary local (*adat*) laws and rights governing the allocation and use of natural resources. During the recent past, *adat* laws were seldom applied. However, under the new autonomy era, *adat* laws are being accorded increasing attention. In some Program areas, such as Raja Ampat and Biak, *adat* rights are honored and of significant importance. However, the actual legal mechanisms used to incorporate customary rights into formal laws are still evolving. COREMAP Phase I undertook pioneering work in this field through integrating *adat* rights into a new district law (*perda*) on the Management of Land, Coastal and Marine Resources in East Biak and Padaido. This draft *perda* is under consideration by the Biak regent (*Bupati*) and local legislature (DPRD).

The national legislature is currently considering passage of both new Fisheries and National Coastal Management Acts. The new Fisheries Act is currently under consideration by the DPR. It incorporates clauses supportive of better coral reef management such as those banning the possession of destructive fishing substances (i.e., poisons, explosives, etc.) and fish captured through destructive means. The National Coastal Management Act is also expected to address many of the lacunae in the legal system that hinder many COREMAP activities including marine zonation. This act supports Act No. 22/99 and provides for decentralization of authority over coastal zone use to regional governments. It allows for the promulgation of locally tailored coastal laws and regulations. The law also includes provisions for both process and content standards for certification of regional and district programs. Consideration of the law is expected in 2003. During the preparation of COREMAP Phase II, assistance was rendered by the PHRD consultant attorney to the Government teams drafting the National Coastal Management Act. Legal support for Program related legislation is envisaged to continue under COREMAP Phase II implementation.

Two COREMAP districts, Selayar and Buton, have portions of their Program area located in national parks, Taman National Taka Bone Rate and Wakatobi respectively. Within national parks, a complex maze of special laws, rules and regulations apply. Generally, the districts control the legal instruments, which apply to residents and the park those, which apply to natural resources. However, ultimate authority for activities conducted within the park is at the discretion and jurisdiction of the park authorities. Consequently, donor activities occurring with national parks require careful coordination between both park and district officials. Within national parks, the Program seeks to build on partnership arrangements with park authorities, local government, NGOs and the communities through co-management mechanisms.

Improvement in Indonesia's weak enforcement of laws and regulations is considered a major challenge for the nation as a whole. Deficiencies in the law enforcement, legal and judicial systems are pervasive, cannot easily be corrected and impact on the entire social and economic fabric of the nation. Overcoming the legal systems problems are well beyond the Program's scope and will require improved transparency, elimination of corruption and strengthened institutional capability, especially of the judiciary. Due to a mix of past heritage, weak legal environment and confusion over decentralization issues, resource allocation and use decisions are often taken by the Government at all levels without adequate consideration of sustainability, legality or significant public consultation.

**Planning Framework.** Due to the complexity of the sector, BAPPENAS has encouraged many agencies to be involved in regulating and promoting the use, protection and management of coral reef ecosystems. This has sometimes resulted in a lack of coordination between government institutions. Many resource management issues are addressed by ministerial decrees, but provide only partial solutions because the ministry concerned has limited jurisdiction. Decrees may be inconsistent with one another and hence difficult to implement. The Spatial Planning Act No. 24 of 1992 was aimed at reducing conflicts over the use of land and sea resources by providing strong legislation for resource allocation and management based on spatial considerations. However, institutional weaknesses and lack of political will have failed to sufficiently institutionalize the spatial planning concept in managing marine and terrestrial resources. At the same time, NGOs are playing an increasingly significant role in promoting and facilitating the establishment of conservation and sustainable development programs.

Over the past decade, there has been a shift in emphasis, with measures introduced for resource values to be taken into account in preparing development plans. Projects have been implemented to enhance the capabilities of government agencies for resource management, data acquisition and exchange and resource assessment. These include World Bank funded projects such as: (i) COREMAP Phase I<sup>3</sup>; (ii) Kerinci Seblat<sup>4</sup>; (iii) Western Java Environmental Management<sup>5</sup>; and (iv) Decentralized Agriculture and

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<sup>3</sup> Loan 4305-05 for \$6.9 million IBRD and GEF TF-28373 for \$4.1 million GEF

<sup>4</sup> Loan TF-28312 for \$13.8 million

<sup>5</sup> Loan 4612/3519 for \$18.0 million

Forestry Extension<sup>6</sup>. Similar ADB funded projects are: (i) Land Resource Evaluation and Planning (LREP), (ii) Second Land Resources Evaluation (LREP II), (iii) Marine Resources Evaluation and Planning (MREP), (iv) Coastal Community Development and Fisheries Resources Management, (v) Coral Reef Rehabilitation and Management (COREMAP Phase I), (vi) Coastal Community Development and Fisheries Resource Management (COFISH) and (vii) Marine and Coastal Resources Management (MCRMP). Other bilateral projects like those of JICA and USAID's Natural Resources Management Program (NRMP) and Project Pesisir also have a similar formats. An important contribution of these programs and projects is the heightened awareness created among government planners of the need for sustainable use of resources, including coral reefs. However, most projects affect only a small part of Indonesia's land and marine areas, and a considerable program of sustained effort will be required to make a significant difference to the ways in which the country's natural resources, including coral reefs, are regarded and managed.

Under Act 22/99, sectoral agencies have responsibility for planning within their respective sectors and areas of jurisdiction. The capacity of provincial and district agencies to plan and manage marine resources and to enter into co-management arrangements with local communities, however, is still being developed. Significant strengthening is needed for local institutions to be effective in contributing to the rehabilitation and management of coral reef ecosystems and facilitating coastal community development. In addition to the sectoral agencies operating under either the Governor or *Bupati*, it is envisaged that the DPRD's will play an increasingly important role in the management of marine resources. For example, their approval is required for the legislation required to legalize spatial plans and zoning developed by communities with Dinas support.

### **Adaptable Program Loan**

**Changes to the Program's Approach in Phase II.** As mentioned in Section B.1 of this document, the COREMAP APL represents the first time any developing country has initiated a program of such scale to target the sustainable management of coral reefs and associated ecosystems. For this reason, Phase I was designed to *test* approaches in several pilot sites, in order to generate lessons learned to inform the design of an expanded number of priority coral reef sites in Phases II and III. As such, Phase I generated a wealth of information and experiences which are reflected in the design of Phase II (see Section B.4: Lessons Learned). In particular, the independent evaluation of Phase I suggested that coral reef ecosystem management activities supported by the COREMAP program should take a greater development focus, placing community needs as the focus of coral reef ecosystem management, rather than a pure conservation approaches. As a result of this lesson learned from the Phase I pilots as well as good practices worldwide, Phase II is designed to proactively engage with communities in order to provide them with a more central role in managing coral reef ecosystems.

In addition to adapting the design of Phase II to reflect these lessons learned, significant institutional developments have taken place in Indonesia over the course of Phase I, in the form of decentralization. As mentioned previously in this Annex, the Regional Autonomy Act No. 22 of 1999 (Act No. 22/99) devolves responsibility for marine and coastal resources within Indonesia's territorial waters to regional governments, with districts controlling waters stretching from the shoreline to 4 nautical miles (nm) offshore.

The changes to the program's approach in Phase II have come as a result of two other factors in addition to the lessons learned and decentralization:

- During the first phase the Government of Indonesia established a new Ministry for Marine Affairs and Fisheries (MMAF), which now has the responsibility for managing the country's

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<sup>6</sup> Loan 4510/3280-0 for \$18.0 million

coastal and marine resources. As a result, MMAF will take over the program coordination responsibilities from LIPI; and

- During the first phase several donors collaborated through the program in each site, including the Asian Development Bank, AusAID and the World Bank/GEF, with different donors responsible for different components of the project. The Independent Evaluation concluded that a lack of coordination in pilot sites resulted in fragmented implementation, and emphasized that establishing coral reef management systems is a process. In Phase II, the Asian Development Bank will be responsible for implementing all aspects of this process in program sites in western Indonesia, while the World Bank will be responsible for all aspects in the six priority districts in eastern Indonesia, essentially implementing two ‘stand-alone’ projects. Due to a change in implementation policies in Indonesia, AusAid will no longer be directly financing sites in the COREMAP program, and areas previously funded during Phase I will become part of the World Bank/GEF – financed Phase II.

However, while the lessons learned from Phase I and the impact of decentralization (as well as the creation of MMAF and shifting responsibilities of donors) have resulted in changes in the program’s approach in the second phase, the overall program and Phase II objectives remain substantially unchanged. Rather, the fact that the design of Phase II has evolved from the first phase to reflect these factors is a testament to adaptive learning.

The Phase II design reflects exogenous changes to the political and lending environment:

<b>CORE Issue</b>	<b>Phase I</b>	<b>Phase II</b>
<b>Program Approach</b>	“Save The Reefs” Conservation	“Terumbu Karang Sehat, Ikan Berlimpah”; Cons. thru Co-Management
<b>Decentralization</b>	National Implementation	District & Community Implementation
<b>Role of Donors</b>		
<i>World Bank-GEF</i>	Enforcement and Awareness components and 2 Sites in East;	WB-GEF stand-alone in East
<i>ADB</i>	Monitoring and 2 Sites in West	ADB stand-alone in West
<i>AusAID</i>	National Training Unit and Site	AusAID Out. WB finances AusAID site
<b>Other Key Roles</b>		
<i>Role of NGOs @ site</i>	<u>One</u> highly involved	<u>All</u> highly involved
<i>Role of Private Sect.</i>	None/Crowded Out	Highly involved

A key outcome to these changes in the design of Phase II is that the scale of the overall program has been revised upwards. At the time of the last Board discussion (March 4, 1998), World Bank lending had been projected at US\$ 66.9 million, towards an overall program size of US\$ 105.3 million. This has now been revised to reflect the new requested program finance.

IBRD/IDA, GEF and GOI Phase II Program Financing Estimates (US\$ Million Equivalent):

[ ] indicated revised loan/credit request.

( ) indicates GEF co-financing that will be requested at MTR as per GEF requirements

Phase	IBRD/IDA	GEF	GOI	Total	Duration
Phase I	6.9	4.1	1.8	12.8	1998–2001 [1998-2004]
Phase II	25.0 [56.2]	7.5	10.0 [10.9]	42.5 [74.6]	2001–2007 [2004-2009]
Phase III	35.0 [60.0]	0 (10.0)	15.0 [15.0]	50.0 [85.0]	2007–2013 [2010-2015]
<b>Total</b>	<b>66.9</b> <b>[123.1]</b>	<b>11.6</b> <b>[21.6]</b>	<b>26.8</b> <b>[27.7]</b>	<b>105.3</b> <b>[172.4]</b>	1998-2009 [1998-1015]

## Technical Annex 2: Major Related Projects Financed by the Bank and/or other Agencies (At-A-Glance)

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

Project	Donor	Location	Sector Issue	Budget	Implementation Period
COREMAP	ADB	West Indonesia	Coral Reef Management	US\$6.7 million US\$33 million	1998-2003 2003-2006
COREMAP Sikka	AusAid	Flores	Coral Reef Management	Aus \$8.2 million	1998-2004
COFISH	ADB	Java, Sumatra	Small scale Fisheries Development	US\$40 million	2002-
MCRMP	ADB	Sumatra, Sulawesi, Java, Papua	Marine Resources Management and Planning	US\$30 million	2001-
CRMP <i>Proyek Pesisir</i>	USAID	Lampung, North Sulawesi, Kalimantan, Papua	Decentralized Coastal Resources Management, Governance	US\$7.5million	1997-2003
<i>Mitra Pesisir</i>	USAID	Jakarta, Papua, East Kalimantan, North Sulawesi,	Governance, Democracy and CB-CRM	US\$2 million 2003-2005	2003-2005
Decentralization of Livestock Services in Eastern Indonesia DELIVERI	DfID	North and South Sulawesi	Decentralization, Privatization, and TQM livestock Services	GBP 5 Million	1995-1999
Global Conservation Program	USAID	Wakatobi National Park, Raja Ampat Area	Biodiversity Conservation, Park Management	US\$200,000 per year	2003-2008
Kecamatan Development Project I, II and III	World Bank	National	Community Empowerment	US\$1 billion	1999-
Coastal Zone Environment and Resources Management Project	AusAid	NTT	Coastal Zone Management	Aus\$19 million	1995-1998
Marine Resources and Management Planning Strategy MREP	ADB	Throughout Indonesia	Marine resources planning	US\$35 million	1993-1998
Mangrove rehabilitation Project	ADB	N, Central, S and S.E Sulawesi	Department of Forestry	US\$8.8 million	1990s
Marine Sciences Strengthening Project	ADB	Ambon, Makassar, Manado, Central Java, West Java., Riau	Directorate of Higher Education, Department of Education	US \$ 43m and \$30m	1990s

(Source: Adapted from Sofa, F. S. 2000)

## Technical Annex 3: Results Framework and Monitoring

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### A. Results Framework

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Critical Assumptions
<p><b>Program Development Objective:</b></p> <p>To establish viable reef management systems in at least six priority districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or preserve intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia</p>	<p><b>Impact/Outcome Indicators:</b></p> <p>Management &amp; Empowerment Indicators:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Collaboratively managed marine conservation areas cover 10 % of program district reefs by EOP</li> <li><input type="checkbox"/> 70 % of operating costs of program activities fully integrated into target district Government programs and funded independent of COREMAP II by EOP</li> <li><input type="checkbox"/> Awareness about the importance of coral reefs increases to and/or maintained at 70 % in all program districts<sup>7</sup></li> </ul> <p>Biophysical Indicators:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Live coral cover in program districts increases by 5 % annually until levels are reached and maintained comparable to those of similar reefs in well-managed or pristine areas<sup>8</sup></li> <li><input type="checkbox"/> Avg. catch-per-unit-effort (CPUE) for early-breeding indicator species harvested by each of the main sustainable fishing techniques in program districts increases 35% by EOP, while avg. CPUE for medium-size indicator species harvested by each of the main sustainable fishing techniques in program districts increases by 10% by EOP<sup>9</sup></li> </ul> <p>Socio-economic and Poverty Indicators:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Total income received from, and the total number of people receiving their income from, sustainable reef -based and reef -substitute activities<sup>10</sup> in program districts increases by 10 % by EOP</li> <li><input type="checkbox"/> At least 70% of fishers/beneficiaries in coastal communities in program districts perceive the program has had a positive impact on their welfare and economic status, by EOP</li> </ul>	<p>(i) District, MMAF annual reports (ii) district laws, village ordinances (iii) boundary demarcations (iv) independent evaluations of MCA mgt. effectiveness<sup>11</sup></p> <p>Budget reports for operating costs from District Governments and PMUs</p> <p>A.C. Nielson independent surveys at Y1, mid-point, EOP</p> <p>Annual reports by District CRITCs</p> <p>Annual reports by District monitoring teams, Dinas DKP</p> <p>(i) Annual SUSENAS data (ii) household surveys</p> <p>Household surveys of representative samples of coastal communities in program districts at mid-term and EOP</p>	<p>MMAF and Districts continue to accept marine conservation areas as a fisheries management tool</p> <p>District, local gov. counterparts will increase share of program funding by EOP</p> <p>No significant coral bleaching events occur as a result of climate variation and/or change</p> <p>Spillover of reef fish from fully-protected MCAs is significant enough to substantially increase fish catch</p> <p>Adequate incentives for sustainable alternatives to reef-based extraction activities exist in coastal communities in program districts</p>

<sup>7</sup> A.C. Nielson in COREMAP I reported that the awareness about the importance of coral reefs increased to levels of 63 to 71 % in program districts.

<sup>8</sup> This keystone indicator is representative of a basket of coral reef health indicators which will be monitored and which in aggregate, will be assessed to represent improvements in coral reef ecosystem health in program districts, including:

- Abundance of indicator benthos species and fish (categorized by genera, trophic group and market category)
- Size class (and subsequently biomass) of indicator fish and benthos species
- Increase in incidence of reef damage in program districts

<sup>9</sup> Early –breeding indicator species are those that reach maturity in 1 to 2 years, while medium-size species are those that reach maturity in 5 to 6 years, and late-breeding indicator species are the highest predators (e.g. sharks). In addition to the targets above, for late-breeding indicator species the target would be for CPUE to stabilize by EOP. The targets for key indicator species are based on Roberts and Gill (2001), summaries of experiences and resulting fisheries benefits from marine reserves around the world and growth rates for these species groups, as well as experiences from marine conservation areas in Indonesia.

<sup>10</sup> Reef-substitute activities refer to alternative livelihoods to reef fishing promoted by the program, as well as general economic diversification away from reef-based extraction activities.

<sup>11</sup> Management effectiveness of MCAs can be independently evaluated and measured against set criteria for (MPA) management effectiveness (LMMMA, 2002). Evaluations should include analysis of data held in participating villages.

<b>Results for each Component:</b> <b>Component 1: Institutional Strengthening</b>	<b>Result Indicators per Component:</b> <b>By End-of-Project</b>	<b>Sources of Verification</b>	<b>Use of Result Indicators</b>
<p>Government institutional responsiveness to meet the needs of coastal communities is enhanced, in support of collaborative management of marine reserves and other marine protected areas</p>	<p><b>Sub-Component 1.1: Program Coordination, M&amp;E, and Training</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> NCU established and operated</li> <li><input type="checkbox"/> M&amp;E Feedback Unit established and operating within NCU at MMAF</li> <li><input type="checkbox"/> Program Management Unit staff and consultants from all (6) target districts trained for program management and activities</li> </ul>	<p>M&amp;E feedback reports<sup>12</sup></p> <p>Workshop, training evaluation materials</p>	<p>Establishment of program units with trained staff in each (6) district, as well as NCU and M&amp;E Feedback Unit at the national level, is a necessary pre-condition for initiation of program activities</p>
	<p><b>Sub-Component 1.2: Coral Reef Research &amp; Monitoring-- CRITC</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Coral reef health baselines conducted, and indicators collected (by district monitoring teams) annually, in (6) program districts</li> <li><input type="checkbox"/> Communities in program districts are trained to conduct coral reef health and fisheries monitoring (in conjunction with Dinas KP)</li> <li><input type="checkbox"/> Results of coral reef health, fisheries and socio-economic monitoring disseminated regularly to PMUs, sub-districts and communities</li> </ul>	<p>Summary reports on reef fisheries (CPUE) produced by district PMU / CRTIC and Dinas KP disseminated monthly to each program village (Based on analyses of Village Reef Fisheries Monitoring)</p>	<p>Information will be used to gauge the impact of program activities on reef health, and to guide community and district reef resource management measures</p>
	<p><b>Sub-Component 1.3: Legal, Policy and Strategy Assistance</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> District laws (SK Bupati endorsed by Ministerial Decree) for enabling co-management of reef fisheries and establishment of MCA s enacted and adopted in (6) program districts</li> <li><input type="checkbox"/> National Reef Fisheries Strategy developed</li> </ul>	<p>SK Bupati endorsed by Ministerial Decree that include at least 70% of suggestions from coastal villages within the district</p> <p>National Reef Fisheries Strategy</p>	<p>Enactment and adoption of district laws (SK Bupati endorsed by Ministerial Decree) and strategies will enable and support co-management activities in communities</p>
<p><b>Component 2: Community-Based &amp; Collaborative Management</b></p> <p>Coastal communities and institutions throughout program districts are empowered to sustainably co-manage coral reef associated ecosystems to increase incomes which will in turn enhance community welfare</p>	<p><b>Sub-Component 2.1: Community Empowerment</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Self-learning materials train 300 COREMAP II district stakeholders (Dinas staff, PMU, etc.)</li> <li><input type="checkbox"/> Social marketing workshop conducted for 180 people from the 6 program districts</li> <li><input type="checkbox"/> Awareness campaign conducted in 80 % of coastal villages in all (6) program districts by 20 alumni of social marketing workshop, involving at least 50% of the pop. in each village</li> <li><input type="checkbox"/> 50 Sr. Extension &amp; Training Officers (SETOs), and 208 Community Facilitators (1 for every two coastal villages) recruited and trained</li> <li><input type="checkbox"/> 416 Community-Based Management Information Centers established in each coastal village in the program</li> <li><input type="checkbox"/> Radio and FM systems operational for all (416) coastal villages in program districts</li> </ul>	<p>Course evaluation reports</p> <p>Workshop reports from each PMU</p> <p>Village attendance lists, village baseline reports and strategic maps</p> <p>National workshop reports, SETO reports</p> <p>Reports from village institutions</p> <p>FM/radio licenses</p>	<p>Staffing and training of stakeholders and extension teams in program districts will allow for initiation of many of the co-management activities of component 2</p> <p>Village baseline reports and strategic resource maps will serve to inform the district laws and fisheries management strategies to support co-management and establish a network of MCAs</p>

<sup>12</sup> Quarterly reports by the PMU in each (6) district to the district boards (CCEs) and annual national report

<p><b>Sub-Component 2.2: Community-Based Coral Reef Management</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Village Resource Assessments conducted in 100% of participating coastal villages</li> <li><input type="checkbox"/> Coral Reef Management Plans (CRMP/RPTKs) created by village community groups, endorsed by the village heads and approved by the village parliament in 75% of the participating coastal villages in program districts</li> <li><input type="checkbox"/> All small-scale fishing vessels registered at the Dinas KP in each program district</li> <li><input type="checkbox"/> At least 50% of undercover anti-destructive fishing operations/district by EOP are successful (i.e. results in prosecution)</li> <li><input type="checkbox"/> Number of infringements of fishing rules and regulations observed per unit of patrolling effort by patrols/Siswasmas<sup>13</sup> decreases by 10% per year over the period of the program (after the baseline year)</li> <li><input type="checkbox"/> At least 10% of coral reefs in (6) program districts established &amp; demarcated as 'no-take' MCAs</li> </ul>	<p>Village resource maps</p> <p>CRMPs endorsed and approved</p> <p>Vessel registration statistics at Dinas KP</p> <p>Police, MCS unit &amp; judicial reports</p> <p>Police &amp; judicial reports</p> <p>Boundary markers</p>	<p>Village resource maps will be used as a planning tool for communities to create CRMPs</p> <p>The CRMPs will establish MCAs and local reef fisheries management measures, as a pre-condition for communities to be eligible for program grants</p>
<p><b>Sub-Component 2.3: Community Development</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Transparent financial management systems established in all program (416) coastal villages</li> <li><input type="checkbox"/> At least 300 alternative income generation (AIG) pilots initiated, of which 75% become financially viable (FIRR&gt;10%) by EOP in all participating coastal villages in program districts</li> <li><input type="checkbox"/> 15% of fishers/households affected by establishment of MCAs diversify into other occupations outside the reef fisheries</li> <li><input type="checkbox"/> At least 300 savings/credit facilities established or expanded in coastal villages in program districts; with at least 75% repayment rate; at least 30% shareholding by women</li> </ul>	<p>Financial bookkeeping by villages</p> <p>Annual reports from the PMU in each program district</p> <p>Annual reports by SETOs, PMUs</p> <p>Annual reports from local lenders/financial management institutions</p>	<p>Verification that transparent financial management systems are in place in coastal villages will allow for program funds to support AIG pilots</p> <p>Information on AIG pilots, diversification of fishing households and disbursement of village credit/savings funds will help to gauge the program's impact on poverty in coastal communities in program districts</p>
<p><b>Sub-Component 2.4: District Marine Conservation Area Management</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Program units (6 District Boards, 50 Sub-district Boards) established and operating in each (6) district</li> <li><input type="checkbox"/> District Marine Resources Strategic Plans created and enacted in (6) program districts</li> <li><input type="checkbox"/> Network identified and established of MCAs in program districts</li> <li><input type="checkbox"/> Sustainable live coral reef fish certification programs established in 2 pilot program districts</li> </ul>	<p>SKs/perdas, meeting attendance lists &amp; minutes</p> <p>District Marine Resources Strategic Plans published and distributed to villages, buoy markers in place</p> <p>Relevant certifications issued</p>	<p>District fisheries management strategies will identify &amp; establish district-scale networks of MCAs, which will be used to support implementation and/or expansion of community-scale MCAs</p>

<sup>13</sup> Community-managed surveillance of the reef fisheries.

	<p><b>Sub-Component 2.5: Marine Park Support</b></p> <ul style="list-style-type: none"> <li>❑ Improved management effectiveness (including establishment of Park Advisory Boards in each) of 2 National Marine Park Authorities (Taka Bone Rate and Wakatobi) and 4 KSDAs (Raja Ampat, Padaido, Sikka and Kapoposang) in the protection of biodiversity of global significance, as indicated by MPA Scorecard</li> <li>❑ Number of infringements of Park rules and regulations observed per unit of patrolling effort by park ranger teams decreases by 5% per year over the period of the program</li> </ul>	<p>Board meetings/minutes, revised and/or socialized park plans and boundary demarcations, stakeholder surveys, Annual MPA Scorecard</p> <p>Media, police and judicial reports, stakeholder feedback</p>	<p>Revised and socialized park management plans will guide program-supported co-management activities within the park</p> <p>Number of infringements will indicate ability of park management to prevent destructive practices</p>
<p><b>Component 3: Public Awareness, Education and Sea Partnership</b></p> <p>Societal awareness of the benefits of coral reef ecosystem conservation and sustainable use is promoted, leading to behavioral change</p>	<p><b>Sub-Component 3.1: Public Awareness Campaigns</b></p> <ul style="list-style-type: none"> <li>❑ trainings/local awareness campaigns conducted annually for target groups in program districts and coastal villages</li> <li>❑ Media (posters, brochures, leaflets, billboards, news stories, puppets, etc.) advocating coral reef conservation and community-based management produced in 6 program districts and 50 sub-districts, advertising campaigns conducted at national and provincial level (e.g. press, radio, television, etc.)</li> <li>❑ Video cameras, video projectors and computers (equipped for video editing and CD writing) to document COREMAP II activities installed in each program district (including FM radio in selected sub-districts)</li> <li>❑ Stakeholders (i.e. coral reef resource users in the 6 program districts) are more willing to participate in the sustainable management of coral reef ecosystems, 20 % above baseline of survey responses</li> </ul>	<p>Project monitoring reports</p> <p>PMU, media reports</p> <p>PMU records</p> <p>A.C. Nielson independent surveys at Y1, mid-point, EOP</p>	<p>PMU, monitoring and media reports will be used to gauge the progress of awareness activities and campaigns designed to influence the behavior of coral reef resource users</p> <p>Independent surveys by EOP will help verify if the program has improved the willingness of stakeholders in all (6) program districts to participate in sustainable management of coral reef ecosystems</p>
	<p><b>Sub-Component 3.2: Education Programs</b></p> <ul style="list-style-type: none"> <li>❑ Coral reef ecosystem conservation materials included in the formal Indonesian elementary education system (i.e. MULOK (Muatan Lokal) or SAINS UNTUK WILAYAH PESISIR</li> <li>❑ 75 % of teachers in coastal villages/regions of program districts attend training workshops and receive credit points</li> </ul>	<p>Education materials (books, teachers manuals, posters, etc.)</p> <p>Workshop reports/ evaluations</p>	<p>Trainings and materials will indicate that teachers have scientific teaching tools for coral reef ecosystem topics and schoolchildren are aware of these topics and practicing environmental friendly behavior towards coral reef ecosystems</p>
	<p><b>Sub-Component 3.3: Sea Partnership Program</b></p> <ul style="list-style-type: none"> <li>❑ National Sea Partnership Office established</li> <li>❑ 12 university staff/yr placed in local gov. offices in (6) program districts</li> <li>❑ 12 students from program districts receive university scholarships per/yr, and work in program sub-districts for a subsequent year</li> <li>❑ 9 students/program sub-district receive high school scholarship/yr and work in program communities for a subsequent year</li> <li>❑ 60 students per/yr distribute community-based coral reef management information packets in coastal villages</li> </ul>	<p>Sea Partnership annual report</p> <p>PKL reports</p> <p>District government reports</p>	<p>Student distribution of community-based coral reef management information packets will indicate the extent to which program activities and awareness can be expanded beyond program sites</p>

	<p><b>Sub-Component 3.4: Program Support Communication</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Program information packets distributed to all (6) program sub-districts, as well as program newsletters</li> </ul>	<p>Information packets, newsletters</p>	<p>Distribution of program information packets will serve as an indicator of impact that program staff are informed of reef conservation activities in program districts</p>
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## B. Arrangements for Results Monitoring

Outcome Indicators	Baseline	Data Collection and Reporting				
		YR3 (MTR)	YR6 (EOP)	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<b>Management &amp; Empowerment Indicators</b>	No MCAs currently exist in program districts	---	At least 10 % of reefs in program districts are in MCAs	Annual reports by PMU, NCU on MCAs legalized by village ordinances and district laws, bi-annual independent reviews of management effectiveness of MCAs	Areas demarcated by Dinas DKP	Dinas DKP in each program district, PMU
Effectively and collaboratively managed fully-protected marine conservation areas (i.e. 'no-take zones') cover 10 % of program district reefs by 2010	---	---	---	---	---	---
70 % of operating costs of program activities fully integrated into target district Government programs and funded independent of COREMAP II by 2010	0%	30%	70%	Annual budgets for program activities in each district	Annual budget report from PMU, NCU	Manager at PMU
Awareness about the importance of coral reefs increases to and/or maintained at 80 % in all program districts	Between 60 and 70 % in Phase I districts, TBD for new program districts	---	80%	A.C. Nielson independent surveys at Y1, Y3, EOP	Beneficiary, household surveys	NCU
<b>Biophysical Indicators</b>	For reef edge:	5 % from baseline until benchmark reached and/or maintained	25 % from baseline until benchmark reached and/or maintained	Annual surveys conducted by district monitoring team in each program district, results published by NCU	RRI and LIT surveys	District monitoring team in each program district, results compiled at NCU
Live coral cover in program districts increases by 5 % annually until levels are reached and maintained comparable to those of similar reefs in well-managed or areas	Biak – 18.3% Sikka – 13.1% Others – TBD	---	---	---	---	---
Avg. catch-per-unit-effort (CPUE) for early-breeding indicator species harvested by each of the main sustainable fishing techniques in program districts increases 35% by EOP	TBD	---	35 % increase from baseline	Monthly community-based fisheries monitoring, reports by Dinas DKP	Fishers' logbooks, data sheets recorded by community members at key landing sites	Dinas KP, program extension teams
Avg. CPUE for medium-size indicator species harvested by each of the main sustainable fishing techniques in program districts increases 10% by EOP	TBD	---	10% increase from baseline	Monthly community-based fisheries monitoring, reports by Dinas DKP	Fishers' logbooks, data sheets recorded by community members at key landing sites	Dinas KP, program extension teams
<b>Socio-Economic &amp; Poverty Indicators</b>						
Total income received from, and the total number of people receiving their income from, sustainable reef-based and reef-substitute activities in program districts increases by 10 % by 2010	Baseline of fishers and income TBD	---	10 % increase from baseline	Annual and bi-annual reports by district and/or independent evaluation teams to PMU, NCU	Annual SUSENAS data, household/beneficiary surveys	District monitoring teams, NCU
At least 70% of fishers/beneficiaries in coastal communities in program districts perceive the project has had a positive impact on their welfare and economic status, by 2010	---	---	70 %	Mid-term and EOP reports by NCU	Household/beneficiary surveys	District monitoring teams, NCU

*Data Collection and Reporting*

<i>Outcome Indicators</i>	<i>Baseline</i>	<i>YR3 (MTR)</i>	<i>YR6 (EOP)</i>	<i>Frequency and Reports</i>	<i>Data Collection Instruments</i>	<i>Responsibility for Data Collection</i>
<b>Component 1: Institutional Strengthening</b>						
<i>Sub-Component 1: National Coordination, M&amp;E and Training</i>						
• NCU established and operated	NCU established in 2003	Ongoing operation	Ongoing operation	NCU will submit an annual report	Report submitted to World Bank	World Bank
• M&E Feedback Unit established and operating within NCU at MMAF	----	Established and operating	Established and operating	Unit will collect and consolidate quarterly and annual reports from districts and submit to NCU	PMUs, NCU receive reports	PMUs, NCU
• Program Management Unit staff and consultants from all (6) target districts trained for program management and activities	----	PMUs established and operating	PMUs operate independent of program	PMUs will submit quarterly results to M&E Feedback Unit	Quarterly monitoring reports from PMU	PMU
<i>Sub-Component 2: Coral Reef Research and Monitoring—CRITC</i>						
• Coral reef health baselines conducted, and indicators collected (by district monitoring teams) semi-annually, in (6) program districts	Baselines conducted in Year 1 for each program district	Reef Health indicators collected annually		Semi-annual reports by district reef health monitoring team to PMU, PMU database	RRI Baseline (up to 1,000 sites/district); annual RRI (up to 300 sites/district) LIT	District reef health monitoring team in PMU/local institution, Dinas KP
• Communities in program districts are trained to conduct coral reef health and fisheries monitoring (in conjunction with Dinas KP)	None	All program villages and Dinas KP regularly conduct reef health, fisheries monitoring	Results of village/Dinas KP reef health monitoring significantly correlates to data results from district reef health monitoring team, villages continue to conduct fisheries monitoring independently	Quarterly to semi-annual reef health monitoring by villages and Dinas KP – reports to PMU and Dinas KP; Monthly reports on CPUE for each village	Dinas KP, PMU collect reef health monitoring results from villages; SETOs consolidate village fisheries monitoring results and send to Dinas KP	PMU, Dinas KP
• Results of coral reef health, fisheries and socio-economic monitoring disseminated regularly to PMUs, sub-districts and communities	None	Reef health, fisheries and monitoring results regularly disseminated to stakeholders		Monthly village fisheries reports; 6-monthly district reef health reports	Reports disseminated through SETOs to sub-districts, villages; through PMU to NCU	PMU, SETOs, Dinas DKP
<i>Sub-Component 3: Legal, Policy and Strategy Assistance</i>						

• District regulations for enabling co-management of reef fisheries and establishment of MCAs enacted and adopted in (6) program districts	None	SK Bupati endorsed by Ministerial Decree	----	District laws passed	PMU collects district legislation	PMU
• National Coral Reef Fisheries Strategy created and adopted	----	----	Strategy created and adopted	National Strategy Document	Feedback unit verifies Strategy creation	M&E Feedback Unit
<b>Component 2: Community-Based &amp; Collaborative Management</b>						
<i>Sub-Component 1: Community Empowerment</i>						
• Self-learning materials train 300 COREMAP II district stakeholders (Dinas staff, PMU, etc.)	----	300 stakeholders throughout 6 districts trained	----	Workshop reports	Reports submitted to NCU	M&E Feedback Unit
• Social marketing workshop conducted for 180 people from the 6 program districts	----	180 people from program districts trained in social marketing Campaign	----	Workshop reports	Reports submitted to PMU	PMU
• Awareness campaign conducted in 80 % of coastal villages in all (6) program districts by 20 alumni of social marketing workshop, involving at least 50% of the pop. in each village	----	Campaign conducted in at least 333 villages	----	Village Baseline Reports	Reports submitted to PMU	PMU
• 50 Sr. Extension & Training Officers (SETOs), 208 Community Facilitators (1 for every two coastal villages) and 832 Village Motivators (2/coastal village) recruited and trained	----	50 SETOs, 208 CFs, 832 VMs recruited and trained	----	PMU reports on recruitment (quarterly)	Quarterly PMU reports to NCU	PMU, M&E Feedback Unit
• 416 Community-Based Management Information Centers established in each coastal village in the program	----	Information centers established in 416 villages	----	Disbursements for establishment of information centers completed by YR 3	SETO reports, Program disbursements	PMU
• Radio systems operational in at least 80% of all participating (416) coastal villages in program districts	----	416 coastal villages have radio systems operational	All radio systems still operational and maintained independently	Disbursements for radio systems completed by YR 3	SETO reports, Program disbursements	PMU
• FM Radio stations operational in at least 15 of all participating coastal villages in program districts.						
<i>Sub-Component 2: Community-Based Coral Reef Management</i>						
• Village Resource Assessments conducted in 100% of participating villages	-----	Assessments conducted for 100% of villages	----	Village Participatory Resource Assessment	Assessments submitted to PMU by SETOs	PMU, M&E Feedback Unit
• Coral Reef Management Plans (CRMP/RPTKs) created by village community groups, endorsed by the village heads and approved by the village parliament	-----	CRMP/ RPTKs endorsed by village heads in 85% of coastal	----	CRMP/RPTK	CRMP/RPTKs submitted to PMU/CCE Boards by SETOs	PMU, M&E Feedback Unit

in 70% of participating coastal villages in program districts		villages					
• All small-scale fishing vessels registered at the Dinas DKP in each program district	None	100% of vessels registered	Ongoing registration	Vessel registrations, summarized annually	Vessels register with Dinas DKP	Dinas KP	
• 75% of undercover anti-destructive fishing operations/district/year are successful (i.e. results in prosecution)	None	35% successful	75% successful	Mid-term and EOP report by SETOs	SETOs, CFs survey fishing practices in respective villages	PMU, Dinas KP	
• Number of infringements of fishing rules and regulations observed per unit of patrolling effort by patrols/Reef Watchers decreases by 10% per year over the period of the program	TBD from each village and district after YR 2 when Reef Watchers operational	10% decrease from baseline	40% decrease from baseline	Reported infringements from Reef Watchers per estimated patrols	Reports kept by MCS Response vessels	PMU, Dinas KP	
• At least 10% of reefs in (6) program districts established & demarcated as 'no-take' MCAs	0	At least 5%	At least 10%	Village ordinances (Perdes) to create sanctuaries, District laws (Perdas)	Reports from SETOs, PMU; registered at Dinas KP, MCA maps	PMU, Dinas KP records and maps of MCAs legally established	
<i>Sub-Component 3: Community Development</i>							
• Transparent financial management systems established in all program (416) coastal villages	TBD	Established in all 416 villages	----	Financial bookkeeping by villages (monthly)	Verification by Community Facilitators, Village Motivators	PMU	
• Total of 300, of which 75 % financially viable (FIRR>10%), alternative income generation (AIG) pilots in all (416) coastal villages in program districts	----	100 financially viable AIGs	300 financially viable AIGs	Financial bookkeeping by villages (monthly)	Reports by SETOs on village disbursements, repayments	PMU	
• 15 % of fishers/households affected by establishment of MCAs diversify into other occupations outside the reef fisheries	TBD, baseline of fishing households in program villages	15% of households in new occupations	15% of households in new occupations	Socioeconomic analysis of SUSENAS data, surveys, YR3, 6	Socioeconomic analysis teams coordinated by PMU	PMU	
• 416 savings/credit facilities established or expanded in coastal villages in program districts; with at least 90 % repayment rate; at least 30% shareholding by women	----	416 savings/credit facilities established or expanded with program funding	Savings/credit facilities operate independently	Financial bookkeeping by villages (monthly)	Verification by Village Motivators, SETOs	PMU	
<i>Sub-Component 4: District Marine Conservation Area Management</i>							
• Program units (6 District Boards, 50 Sub-district Boards) established and operating in each of the target districts	----	6 Boards, 50 sub-district Boards established	6 Boards, 50 sub-district Boards operating independently	Quarterly meetings	Meeting minutes	PMU	
• District Marine Resources Strategic Plans created and enacted in (6) program districts	None	6 District Marine Resources Strategic Plans created	----	District Marine Resources Strategic Plans created and enacted by Yr. 3	Plans endorsed by District Boards	PMU	
• Network identified and established of MCAs in program districts	None	At least 5 % district reefs in	At least 10 % district reefs in	Village ordinances (Perdes) to create	Reports from SETOs, PMU	PMU will monitor progress towards	

		MCA's	MCA's	sanctuaries, District laws (Perdas)		establishment of MCA's
<ul style="list-style-type: none"> <li>Sustainable live coral reef fish certification programs established in 2 pilot program districts</li> </ul>	None	Programs in 2 districts	---	Number of products certified for export	Certifications awarded by responsible agency	MAC
<i>Sub-Component 5: Marine Park Support</i>						
<ul style="list-style-type: none"> <li>Improved management effectiveness (including establishment of Park Advisory Boards in each) of 2 National Marine Park Authorities (Taka Bone Rate and Wakatobi) and 4 KSDAs (Raja Ampat, Padaido, Teluk Maumere, and Kapoposang) in the protection of biodiversity of global significance, as indicated by MPA Scorecard</li> </ul>	TBD for each Park in Year 1 (initial survey of MPA Scorecard)	20% increase in scores from Scorecard in each Park	At least 30% increase in scores from Scorecard in each Park	Annual response to MPA Scorecard survey by Park Managers	MPA Scorecard	M&E Feedback Unit
<ul style="list-style-type: none"> <li>Number of infringements of Park rules and regulations observed per unit of patrolling effort by park ranger teams decreases by 5% per year over the period of the program</li> </ul>	TBD for each Park in YR 1	15% decrease from baseline	30% decrease from baseline	Logbooks recorded after every patrol	Patrol logbooks	Park Management Authority, M&E Feedback Unit
<b>Component 3: Public Awareness, Education and Sea Partnership</b>						
<i>Sub-Component 1: Public Awareness Campaigns</i>						
<ul style="list-style-type: none"> <li>trainings/local awareness campaigns for target groups conducted annually in program districts and coastal villages</li> </ul>	----	trainings/campaigns conducted annually	trainings/campaigns conducted annually	Records from PMU	Mid-term, EOP review	PMU
<ul style="list-style-type: none"> <li>Media (posters, brochures, leaflets, billboards, news stories etc.) advocating coral reef conservation and community-based management produced in 6 program districts and 50 sub-districts</li> </ul>	----	Media materials produced in 6 districts and 50 sub-districts	----	PMU report of materials produced	Mid-term review	PMU, M&E Feedback Unit
<ul style="list-style-type: none"> <li>Video cameras, video projectors and computers (equipped for video editing and CD writing) to document COREMAP II activities installed in each program district</li> </ul>	----	Equipment installed in each (6) district	----	PMU report of disbursements, materials installed	Mid-term review	PMU, M&E Feedback Unit
<ul style="list-style-type: none"> <li>Stakeholders (i.e. coral reef resource users in the 6 program districts) are more willing to participate in the sustainable management of coral reef ecosystems, 20 % above baseline of survey responses</li> </ul>	Baseline awareness surveys to be conducted YR1	----	20 % increase from baseline in (6) program districts	Baseline surveys, EOP Survey	Baselines conducted during Village Baseline Surveys, Resource Assessments, EOP by PMU-coordinated team	PMU, M&E Feedback Unit
<i>Sub-Component 2: Education Program</i>						
<ul style="list-style-type: none"> <li>Coral reef ecosystem conservation materials included in the formal Indonesian elementary education system (i.e. MULOK (Muatan Lokal) or SAINS UNTUK WILAYAH PESISIR</li> </ul>	-----	-----	Reef conservation materials included in formal system in	Ongoing activity, verified at EOP	EOP Review	PMU

<ul style="list-style-type: none"> <li>At least 75% of teachers in coastal villages/regions of program districts attend training workshops and receive credit points</li> </ul>	0	45% of teachers trained	each (6) district 90 % of teachers trained	Workshop evaluations, results	PMU verification	PMU, M&E Feedback Unit
<i>Sub-Component 3: Sea Partnership Program</i>						
<ul style="list-style-type: none"> <li>National Sea Partnership Office established</li> </ul>	----	Office established	-----	Annual reports from Office	Reports sent to NCU	M&E Feedback Unit
<ul style="list-style-type: none"> <li>12 university staff/yr placed in local gov. offices in (6) program districts</li> </ul>	0	12 staff/yr in each district	12 staff/yr in each district	Annual reports from Office	Reports from each staff, local Gov. evaluations	National Sea Partnership Office
<ul style="list-style-type: none"> <li>6 students from program districts receive university scholarships per/yr, and work in program sub-districts for a subsequent year</li> </ul>	0	6 students/yr	6 students/yr	Annual reports from Office	Scholarship records, sub-district evaluations of students' work	National Sea Partnership Office
<ul style="list-style-type: none"> <li>3 students/program sub-district receive high school scholarship/yr and work in program communities for a subsequent year</li> </ul>	0	3 students/yr	3 students/yr	Annual reports from Office	Scholarship records, high school records, community evaluations	National Sea Partnership Office
<ul style="list-style-type: none"> <li>120 students per/yr distribute community-based coral reef management information packets in coastal villages</li> </ul>	0	120 students/yr	120 students/yr	Annual reports from Office	Student records from University, village evaluations	National Sea Partnership Office
<i>Sub-Component 4: Program Support Communication</i>						
<ul style="list-style-type: none"> <li>Program information packets distributed to all (6) program sub-districts, as well as program newsletters</li> </ul>	-----	Information distributed regularly in (6) districts	Information distributed regularly in (6) districts	Quarterly information distributed to program staff in districts	PMU verification	PMU

## Technical Annex 4: Detailed Program Description

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### A. Program Summary

The COREMAP Phase II Program's objective (purpose) is *that viable reef management systems are established in at least six priority Districts, through a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, which will revive damaged or protect intact coral reef ecosystems and in turn, enhance the welfare of these communities in Indonesia.* The program consists of three major components:

- ❑ Institutional Strengthening (US\$17.1 million—total cost including contingencies)
- ❑ Community-Based and Collaborative Management (US\$44.1 million)
- ❑ Public Awareness, Education and Sea Partnership (US\$13.0 million)

This Annex provides a broad description of the components and activities of the COREMAP Phase II program. This description is based on the national and district Program Implementation Plans (PIPs), and is essentially a summary of these PIPs. After an extensive stakeholder consultation process, each (6) program district prepared a PIP for all Phase II activities in that district, and these activities and the entire Phase II program were summarized in a national PIP. Thus, more detail on the institutional structures, specific activities and implementation modalities of COREMAP Phase II can be found in the national and district PIPs.

#### B. Program Description by Component

##### Component 1. Institutional Strengthening

*(US\$17.1 million—total cost including contingencies)*

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The objective of the Institutional Strengthening component is to enhance government institutional responsiveness to meet the needs of coastal communities, in support of collaborative management of marine reserves and other marine protected areas. There are three sub-components envisaged:

##### **Sub-Component (1) Program Coordination, M&E, and Training (\$8.7m)**

The objective of this sub-component is to ensure that institutional structures for national program coordination and decentralized program management are established and sustained. Toward this objective, the second phase program will fund technical assistance, training workshops, equipment and operational support (for the NCU in MMAF). Specific activities will include:

*Activity 1.1. Support for the National Coordination Unit (NCU).* Because the program is nationally coordinated but decentralized in implementation, the executing agency at the national level (MMAF) will house a National Coordination Unit (NCU), rather than a Program Management Office (PMO). This NCU has already been formally established, through a decision letter (SK) issued by the Minister of MMAF in February, 2003.<sup>14</sup> The NCU will be responsible for overall program coordination and day-to-day management, budgeting, financial administration and monitoring, while the targeted districts will be

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<sup>14</sup> SK No.: KEP.03/MEN/2003

responsible for program implementation. Through this activity, the program will support the NCU by training, technical assistance, equipment and operating funds. (For more details on the institutional structure and functions of the NCU, see the national PIP, pgs. 24 – 27).

*Activity 1.2 Support for National Monitoring, Evaluation, and Feedback of Program Activities.* The program will support the establishment and operation of a Monitoring, Evaluation and Feedback Unit within the NCU. This unit will be responsible for consolidating and publishing the results of outcome monitoring activities undertaken in program districts, as well as program performance monitoring and financial management reporting. These results will be published in an annual report on the program (see national PIP, Annex 2: Monitoring Indicators for more details).

*Activity 1.3 Support for Training Coordination in the NCU to Oversee National Workshops and Training to Develop Key Strategies.* Through this activity the program will support national training coordination in the NCU. A Training Team will be directed by a training coordinator from MMAF and a deputy from LIPI. The Training Team will be integral to the NCU and support all the components via existing and future training needs analysis, procurement of local and international training expertise and production of high quality and appropriate training materials. It will work closely with district and communities. The NCU Training Team will focus attention on the Training Needs Assessment (TNA) system and train national and district governments in its use. The Training Team is supported by technical assistance and operating funds. It will also oversee national workshops and training activities to assist the Government and stakeholders to develop key strategies for the management of coral reef and related ecosystem resources, including:

- Coral reef fisheries management;
- Marine conservation areas; and
- Marine biodiversity.

*Activity 1.4 Training to Enhance Management Capacity of Program Management Units (PMUs), and Coordination between the NCU and PMUs.* The program will support national workshops to train staff and consultants from the Program Management Units (PMUs) in each Phase II district. These workshops will be aimed at building the capacity of the PMUs for program management, training staff in program objectives and activities, and establishing coordination linkages between the NCU and PMUs.

*Activity 1.5 Identification of 6 Additional Districts for Phase III Participation.* After year three of implementation, the program is envisaged to expand activities to 6 additional districts for Phase III. This activity will support a national workshop to help identify districts interested in participating in Phase III.

## **Sub-Component (2) Coral Reef Research and Monitoring--CRITC (\$7.9m)**

The objective of this sub-component is to ensure timely provision of directed research, monitoring results and management information necessary to support collaborative coral reef management. Toward this objective, the second phase program will fund technical assistance, local research grants, ongoing reef health surveys and fisheries monitoring activities in each of the program districts, as well training and technical assistance support at the national level. Specific activities will include:

*Activity 2.1 National Coral Reef Information and Training Center (CRITC) Support.* Under COREMAP Phase I, LIPI with Asian Development Bank (ADB) financial support, developed a national CRITC network comprised of a national headquarters at the LIPI COREMAP building linked to regional CRITC branches. Building upon these activities, ADB will continue to provide major assistance to the CRITC for activities at the national level and also in areas of Western Indonesia. Through this activity, the program will enable the national CRITC to provide support to the (6) district CRITCs, as well as coral reef research activities of national interest not covered by ADB-financed programs. In order to implement this activity, LIPI will establish 4 posts in the national CRITC in the fields of CRITC administration, GIS, research and monitoring,

and information system/network and programming. LIPI will provide for staffing of these positions and ensure that career advancement is available for these staff.

Through this activity, the program will:

- *Complement ADB's support to allow the CRITC to conduct international outreach.* The program provides support to the national CRITC for international outreach, including the establishment of an office in the national CRITC dedicated to conducting international searches of coral reef and related ecosystem information networks including websites and access to online abstract services. The international outreach office will be staffed with one domestic International Outreach consultant for 18 months, supported by full time LIPI personnel. The consultant will seek out information useful to the COREMAP II Program which would then be translated and forwarded to Phase II stakeholders including the district CRITCs, MMAF, PHKA and local government. The international outreach office will coordinate with MMAF's Public Awareness efforts. The international outreach program will also supply information to overseas institutions and individuals about COREMAP II, potentially making use of information developed under the Program Support Communication sub-component. Improved communications should result in the program and its stakeholders being invited to participate in a wider range of international initiatives, scholarships and research.
- *Produce and distribute key coral reef ecosystem materials created by the CRITC.* Under Phase I a range of coral reef materials were produced, however there was insufficient funding to allow for production and distribution of many of these materials (e.g., Marine Atlas, Manuals, etc.). The Phase II program will provide support to allow for production and dissemination of selected COREMAP products and useful materials from other donors and NGOs. Key outputs from both COREMAP Phases I and II will be evaluated, printed/re-printed and distributed to benefit stakeholders at local, regional, national and international levels.
- *Develop a coral reef management information system (CRMIS).* The CRITC Management and Information Technology (IT) consultants will undertake a needs assessment for the data needs and formats required by District PMUs. Based on consultant input, COREMAP II will contract an IT company who will develop a web-based application to allow data from communities and program districts to be entered into the national monitoring and evaluation data base and for them to be able to access information from both national CRITC and other data sources through medium speed internet access.
- *Establish a VSAT communications system for Eastern Indonesia.* The program component will invest in the establishment and operation of a satellite base station in Jakarta at the national CRITC. The program will also support VSAT connection bases in each (6) district. An IT company will install and maintain the communication network for the full six years of the Phase II program. The IT service will include hosting large amounts of data as follows: the COREMAP homepage; organizational information system; MCSIS; socioeconomic monitoring data base; metadata information systems; reef health monitoring information systems; community-led fisheries catch monitoring; CRITC hotmail; human resources and training information system; library catalogue interface; on line training modules and a project management information system. The IT contract will include training of district staff including the district-based IT/network specialists.
- *Support baseline/initial rapid resource inventory (RRI) surveys in each program district.* Two teams of experts will be created and funded through the national CRITC, in order to conduct baseline/initial RRI/LIT surveys in each (6) program district, along with the district monitoring teams.

- *Support follow-on RRI and line-intersect transect (LIT) monitoring as needed in program districts.* These same teams will continue to assist the district monitoring teams (coordinated by the Research and Monitoring Specialist in each district CRITC) to conduct annual RRI/LIT surveys, until they judge that each district team is adequately trained to independently carry out the surveys. Even after this stage, the Research & Monitoring Specialist in each district CRITC will continue to draw from the survey budget at the national CRITC to fund these district teams.
- *Support for scientific MCA monitoring by a specialized team covering selected sample sites throughout Indonesia.* Once the district monitoring teams are trained to carry out the RRI/LIT surveys independently (generally by two years time), the role of the two teams of experts from the national CRITC will be reduced to quality assurance activities to ensure consistency of results across the sites. LIPI will develop a simple yet scientifically valid format for MCA monitoring and also form an MCA monitoring team from these experts. This team will monitor selected MCAs throughout Indonesia, as well as review the field monitoring protocols issued. The national CRITC will then produce handbooks and training protocols for community based monitoring to be established in the COREMAP Phase II districts.
- *Support for research on the benefits of MCAs for reef fisheries production and management.* There will be a budget at the national CRITC for experts to analyze the results of the scientific MCA monitoring over the course of Phase II, in order to assess the benefits of MCAs for reef fisheries production and management. The aim of this assessment would be to determine the impact of establishing MCAs (as well as other coral reef ecosystem management activities sponsored by the Program) on coral reef fisheries and the livelihoods of the communities dependent upon them, and the findings would be summarized in a comprehensive study or report directly to the Dinas KP, MMAF, communities, NGOs and other Program stakeholders, and published where appropriate.
- *Training.* The national CRITC would conduct training for the district CRITCs and other stakeholders, and in addition to the on-the-job training the district monitoring teams would receive in participating in the RRI/LIT surveys, there would be budget available at the national CRITC for an expert to train the district CRITC staff for one month at the beginning of the Program in the use and operation of the CRMIS.
- *Conference Attendance.* Funds are provided to allow attendance at national and international conferences, including workshops and trainings at the GEF-funded Center in the Philippines for the Coral Reef Targeted Research Initiative. Attendance will allow for technology transfer from participants to the CRITC and as a medium for the CRITC to disseminate information.
- *Research.* CRITC is provided a budget to support national level research studies. Proposals will be solicited from scientific investigators throughout the country on topics related to co-management of coral reefs, based on criteria set by the National CRITC. Proposals can be offered not only by academic research institutions and government agencies but also from the private sector, NGOs and communities. However, all proposals will be held to a high standard of quality. To insure wide participation, the availability of these research grants will be publicly advertised in mass media (e.g., newspapers, newsletters, Program's public support communications, etc.). A multi stakeholder panel chaired by the CRITC will select and award the funds to conduct the studies. The same panel will insure wide spread distribution of results. The research and study topics would be consistent with meeting the program's objective.

*Activity 2.2 District Reef Health Monitoring.* The district level is the primary focus of the COREMAP II research and monitoring activities. In each (6) program district, a district CRITC will be established as a

subunit of, and receive funding through, the PMU (in Phase I districts, this will mean expanding the existing CRITC as a subunit of the PMU, and in new Phase II districts establishing a CRITC in the PMU). Although each district CRITC will have unique requirements, all will have a standard Coral Reef Management Information System (CRMIS) established (including office equipment, Vsat network link, local area network, software programs, etc.), which will be linked to the national CRITC. In addition, each district CRITC will be staffed by a Research and Monitoring Specialist and an Information Systems Specialist. The Research and Monitoring Specialist will be responsible for coordinating annual RRI/LIT surveys of the district reefs (including coordination of the analyses of the results and their entry into the CRMIS), dissemination of the results in the district, coordination of ongoing training of local stakeholders (communities, schools) in reef health monitoring, and coordination of collection and analysis of socioeconomic data every three years. The Information Systems Specialist will provide maps and assist the CBM and MCA/Fisheries Specialists to manage databases in the PMU and Dinas KP generally and ensure data entry, processing and retrieval meets the needs of the Program.

Through this activity, the program will:

- *Monitor local coral reef ecosystem health.* A team of several experts from the national CRITC will conduct a baseline/initial RRI/LIT survey in each district, working with a local district reef health monitoring team coordinated by the Research and Monitoring Specialist (e.g. recruited from local universities), as well as local stakeholders. The experts from the national CRITC will also enter the data into the CRMIS and analyze the results, training the district reef health team in the data entry and analysis as well.<sup>15</sup> The RRI/LIT surveys will be repeated in each district annually, and for the first two to three years the national experts will return to the district to continue to supervise the district monitoring team, until the team is ready to independently conduct the surveys. While the budget for these surveys will rest at the national CRITC, the Research and Monitoring Specialist will coordinate the contracting and implementation of the surveys by both the national and district teams. In addition, an expert from the national CRITC will come to the district for a duration of one month soon after the completion and entry of the data from the baseline/initial RRI/LIT survey, in order to train the Research and Monitoring Specialist and the district reef health monitoring team in the use of the CRMIS in the district CRITC.
- *Export national information needs for Benefit Monitoring and Evaluation (BME), Coral Reef Spatial Information System (CRSIS) and other programs.* The data and results from the regular RRI/LIT surveys, as well as all socioeconomic data and any other information needs would be transmitted via the network connection to the national CRITC.
- *Provide useful information for area decision makers and stakeholders including district and subdistrict government, village heads, communities and fishers.* The two district CRITC specialists will work with other program staff to disseminate key results from the RRI/LIT surveys. From the baselines established in Year 1, the district CRITC will provide analysis of change over time in areas that remain unmanaged and areas that undertake community management initiatives. Processed data will feed back to the communities, become part of the District Marine Resources Strategic Plan and feed into the Program's Public Awareness component. In addition, the two district CRITC specialists will be active in determining information needs and supply of required data, maps and materials to the local government and community programs. They will be tasked to produce and test varied formats of information (maps, charts, etc.) to produce locally useful materials and work with the CBM program

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<sup>15</sup> The national experts from LIPI would be ready upon Program effectiveness to conduct the baseline/initial RRI/LIT surveys, depending on weather and travel conditions. If the Research & Monitoring Specialist has not yet been recruited and the district CRITC fully established, the data, analyses and results would be entered into the district CRITC's CRMIS during the initial training of the Research & Monitoring Specialist.

to disseminate information down to the community level. Small information centers will be established in selected villages throughout the districts for material distribution.

*Activity 2.3 District Fisheries Monitoring.* One of the best indicators of the impacts of program activities towards improving the management and health of coral reef fisheries in program districts, as well as the welfare of the communities dependent upon them, is an increase in the catch of reef fish per unit of fishing effort (CPUE). Through this activity, the program will support community-based reef fisheries monitoring to track changes in CPUE. More specifically, the program will provide training for Dinas KP staff in community-based fisheries monitoring, as well as program extension teams (i.e. SETOs, Community Facilitators and Village Motivators). The SETOs, CFs and VMs would then be supported to train volunteer fishers in villages throughout the district to record catch and effort data (as well as survey fishers at key landing sites). The program will also support these volunteer fishers and community members in the ongoing collection of fisheries catch data (CPUE), and the extension teams and Dinas KP in the regular consolidation of this data (i.e. collecting log books and consolidating data) at the village (by the Village Motivators and Community Facilitators), sub-district (SETOs) and district (by Dinas KP) level. Finally, Dinas KP will be supported to analyze the data and disseminate the results widely throughout the district to stakeholders and policy-makers, as well as to the NCU.

*Activity 2.4 Socio-Economic Data Collected, Analyzed and Disseminated.* The Research and Monitoring Specialist in each district CRITC will have a budget to fund the collection and analysis of national census (SUSENAS) data for the district (where available), once every three years. In addition, the program will support regular beneficiary surveys in households throughout targeted districts to assess the perceived impact of the program on community welfare, as well as the impact of program activities on public awareness of the need for coral reef ecosystem conservation.

*Activity 2.5 Support for Local Research.* The district CRITC (with the rest of the PMU) will develop a research agenda based on the results of the initial Program socialization and other available information. Based on this agenda, the district CRITC will solicit proposals for research through advertisements in regional media, and a joint committee of district CRITC and LIPI experts will select from the proposals received, ensuring technicians with correct field experience are deployed to support the research. Expectation is that funds can be released quickly for the local research with most research will be directed at piloting AIG pilot projects. All solicitation, evaluation, selection and funding processes will be conducted in a transparent manner.

*Activity 2.6 Innovative Research and Studies.* The program will also support innovative research and studies conducted by stakeholders, and based on proposals reviewed and agreed to by a committee as described in the operational manual in each program district. These studies and research would support the development of new technology and techniques for sustainable fishing livelihood opportunities which would serve as alternatives to coral reef exploitation. District research and studies would assist experimentation of fishing methods that open up new access to non-traditional fisheries that reduce the pressure on the reef fishery (e.g. deep water prawn pots, or midwater pelagic fishing pots associated with FAD's). This research would be coordinated by the District CRITC in each PMU.

**Linkages with the GEF-funded Coral Reef Targeted Research Initiative.** Independent of the COREMAP II Program, the GEF is funding a global initiative for targeted research on coral reefs, with centers of excellence established in universities and research institutes around the world, focusing on key themes such as climate change, connectivity, etc. One center will be established in the Philippines, and will provide training on various topics of coral reef research and management. The COREMAP II program will provide a budget at the national CRITC for selected experts to liaise with the center in the Philippines and undertake study tours there on topics relevant to the Program. Likewise, there will be additional budget in each district PMU for local experts to attend study tours at the center on Program topics. These study tours would establish an

ongoing dialogue and exchange of information and lessons between the COREMAP II Program and the Targeted Research Initiative.

### **Sub-Component (3) Legal, Policy and Strategy Assistance (\$0.5m)**

The objective of this sub-component is to legalize program structures, formalize community authority to collaboratively manage coral reef and associated ecosystems, and support the development of key national strategies. Toward this objective, the second phase program will provide technical assistance at the national, district and village levels. Specific activities will include:

*Activity 3.1 Support to Legalize Program Structures.* Through this activity, the program will support the legalization of co-management structures in the program districts, such as the CCE Boards. In addition, where necessary the program will assist in the formalization of the Coastal Management Committees, as well as the district reef health monitoring teams.

*Activity 3.2 Technical Assistance to NCU for National Policy Assistance.* Through a small provision of resources, the program will support the NCU to hold workshops to meet with a wide array of stakeholders in the coral reef fisheries of Indonesia, in order to build consensus around national policies for reef fisheries management.

*Activity 3.3 Technical Assistance to (6) Districts to Assist the Creation and Implementation of Enabling Legislation (Perdas), technical assistance to Communities to assist in the Creation and Implementation of Enabling Legislation (Perdes).* Co-management requires legal support to formalize communities' right to manage coral reef ecosystems and related resources. For this reason, the program will provide legal assistance to the districts (to the CCE Boards and PMUs) to create and implement district legislation (Perdas) to enable communities to collaborate with local government in the management of the reef resources. This legal assistance to the districts will include specific terms of reference for drafting and passing regulations in each district to address the live reef species trade and the use of cyanide in reef fisheries. Lastly, the program will provide legal assistance to support coastal communities in program districts to create and implement village-level legislation (Perdes) to formalize community management plans and measures, such as the establishment of village MCAs.

*Activity 3.4 Sustainable Coral Reef and Reef Fisheries Management Strategies.* Through this activity, provide technical assistance and support for workshops to MMAF. After revisions, support is provided for the dissemination of the enhanced National Coral Reef Management Strategy developed under Phase I. New policies and strategies are developed for two initiatives: (i) Regional Coral Reef Management and (ii) Sustainable Reef Fisheries. After completion, assistance is available to distribute results.

*Activity 3.5 Sustainable Live Reef Fisheries Management Strategies.* At the national level, three actions will be taken: (i) input regarding live reef fish will be provided as a part of the Reef Fish Management Strategy; (ii) a study that outlines a comprehensive program of activities to change the incentive structure (i.e. the pricing) of the live reef food fish; and (iii) a scientific study into the dangers of eating cyanide caught fish. Coordination will be made with pilot related activities in Pangkep and Buton districts.

## **Component 2. Community-Based and Collaborative Management**

*(US\$44.1 million—total cost including contingencies)*

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The objective of this component is to empower all coastal communities and institutions throughout program districts to sustainably co-manage coral reefs and associated ecosystems to increase incomes which will in turn enhance community welfare. This component provides the resources needed to create and implement a

District Marine Resources Strategic Plan for each program district. Activities under this component are generally more defined for the first year of program implementation, with the expectation that each district CCE Board will develop successive year work plans, based on evaluation of program successes and failures to best achieve realization of the goals of COREMAP Phase II. There are five sub-components envisaged:

### **Sub-Component (1) Community Empowerment (\$15.7m)**

The objective of this sub-component is to ensure that all communities throughout program districts are organized and empowered to undertake co-management of the coral reefs and associated ecosystem. Toward this objective, the second phase program will fund technical assistance and extension activities to coastal villages, village consultations and awareness-raising, trainings, construction of coral reef information centers in coastal villages, and provision of management equipment such as two-way radios. Specific activities will include:

*Activity 1.1. Sustainable Coral Reef Fisheries Training.* Through this activity, the program will support the PMU in each district to undertake a series of short, informal and multi-media supported training courses for all COREMAP II staff and key stakeholders at the district level. These courses will explain why management is needed, what benefits are obtained by coral reef management and introduce how management can be implemented, based on real examples from Indonesia and other tropical countries. The first participants will be the PMU staff, several local journalists and the field-team recruited to undertake the initial program socialization/information-gathering activity (Activity 1.2) in each program community. This training/workshop will then be adapted and conducted in a suitable form for other key stakeholders (DPR-D, DKP, Bappeda, NGO's etc) at the district level over the first six months of the program implementation.

*Activity 1.2 Social Marketing of Sustainable Coral Reef Management, Program and Rapid Rural Appraisal (RRA).* The field team and PMU staff will be provided with COREMAP Phase I and other materials prepared to socialize the COREMAP Phase II program. Through this activity the program will support a social marketing workshop to develop locally appropriate approaches to engage all different target stakeholders at the village level (including village heads, BPD, Religious and cultural leaders, 'Tokoh masyarakat and Tokoh Nelayan, women, children fishers, reef gleaners, fish traders and teachers). Field teams of 4 or 5 people will visit each coastal and island community and spend at least a week in each village, undertaking many activities to engage each target group. The teams will socialize the COREMAP II program and raise awareness/ impart information about sustainable reef fisheries management. As well as socializing the program, the field teams will use Rapid Rural Appraisal (RRA) and other techniques to gather baseline information about the fishers and fishery, local importance and perception of the communities towards the reef, reef fishery and management possibilities and collect input into what the communities feel needs to be done to allow them to better manage their reef resources. A target for these socialization activities will be to contact at least 50 percent of the people from each community. The results of this RRA and community sketch maps will be processed by the PMU, combined with other available data (NGO surveys, university research, existing data sets at district government etc) to draft the current situation of the reef fisheries for each district. This information will be processed by the PMU, Bappeda and DKP, to produce the District Marine Resources Strategic Plan (see Activity 4.3) a visualization of the district where fisheries management in realized and achieves maximum sustainable fisheries benefit and conservation of marine biodiversity.

*Activity 1.3 Community Study Tours and Cross Visits.* In addition to socialization of coral reef management techniques, the field teams will begin to identify stakeholders in each village who influence fishers. These key stakeholders will be engaged, and through dialogue and discussion several will be selected to undertake study tours and cross visits to sites implementing good coral reef management in Indonesia and overseas. These key stakeholders will be encouraged to remain engaged in COREMAP II program activities as resource people for program field teams. To reinforce the benefit of study tours, each study tour will be fully documented with video and photographs and VCDs of the visits will be produced and distributed to the communities.

*Activity 1.4 Village Facilitation and Technical Assistance.* Communities interested to participate in the program and willing to commit to undertake coral reef ecosystem management activities will be provided with intensive facilitation for approximately 2 ½ years. Through this activity, the program will support the district PMU to recruit the best of the initial Field Team members as Senior Extension and Training Officers (SETOs) and Community Facilitators to live with the communities. The SETO's will attend a National COREMAP II CBM training, to review and harmonise training materials prepared to support the CBM process. Additional staff will also be recruited to ensure sufficient human resources to provide intensive support for co-management activities. These people will participate in a sustainable coral reef fisheries and social marketing training, after being deployed to work at the village level. SETO's will be tasked over the following six months to repeat the contents of the COREMAP II CBM training at the community level with Village Motivators and Community Facilitators. These facilitation teams (assisted by short-term technical assistance in fisheries resource assessments, law, public awareness, micro-finance management and other fields as needed) will work with the village head, BPD, and all other stakeholders to facilitate the uptake of effective coral reef co-management in each participating village. The facilitation teams will undertake the in-village COREMAP II CBM training that include facilitation skills; gender role in development; organizational analysis/institutional strengthening; basic financial management; community-based management (theory and practice) and analysis of economic activity at the community level. These trainings will be strengthened by ongoing mentoring of male and female Village Motivators (VM's), who will eventually take-over the facilitation role, allowing the Community Facilitators and SETO's to move to another village.

*Activity 1.5 Establishment of Village Coral Reef Information Centers.* Communities requesting facilitation to manage their reef resources will be encouraged to choose an existing communal building to be the information center for coral reef management activities. The program will assist communities to make a plan and budget to rehabilitate the building together. Labor will be voluntary, as will the collection of locally available resources, but the program will support the purchase of cement or zinc roof sheets as needed. The aim is that through this work, the community will see the amount that can be achieved by working together and the benefit of making transparent and comprehensive book-keeping. All activities supported by COREMAP Phase II will need to be managed in this transparent and open way. The information in this center will be continually renewed with local and general information about coral reef management and COREMAP. Each village will receive a grant of approximately Rp 10,000,000 for this purpose.

*Activity 1.6 Communication Networks such as Two-Way Radios.* The coral reef resources utilized by a community are often also used by other communities. In order to establish effective management, use patterns and agreements between users will need to be established between villages. For this reason, the training program will undertake all activities on a rotational basis between adjacent villages, increasing the contacts between villagers within an area. Based on common needs and issues the program extension teams will facilitate the resolution of issues through dialogue and consensus building within and between villages. One of the major successes in COREMAP Phase I was the establishment of radio communication networks between villages. COREMAP Phase II will build upon this success to ensure that all participating villages have radio equipment and communication, thus linking villages, community facilitation team members and the PMU. In areas that receive FM radio coverage, the local radio stations will be engaged to disseminate information about COREMAP II-related issues.

## **Sub-Component (2) Community-Based Coral Reef Management (\$7.4m)**

The objective of this sub-component is to ensure that coastal communities in program districts formulate and implement effective coral reef and associated ecosystems co-management. Toward this objective, the second phase program will fund detailed village resource assessments and mapping exercises, as well as consultations and technical assistance to prepare resource management plans, management equipment for marine sanctuaries, surveillance and enforcement operations, fishing gear inventories and pilot decommissioning activities, as well as support for ongoing village management operations. More specifically, program support will be given for concrete steps taken by communities and districts to improve

the condition of coral reef ecosystems and related resources. The focus of this sub-component is reducing destructive practices and promoting activities that have direct benefit to the reefs and contribute to sustainable reef fisheries. Communities will be trained in simple methods for making baseline surveys and measuring change. This information will feed into a community dialogue to determine whether management interventions implemented by the community are successful in reversing the current downward trend in reef and fisheries quantity and quality and thereby lead to a stable and eventually improving condition. Specific activities will include:

*Activity 2.1 Detailed Participatory Village Resource Assessments and Mapping:*

The program will support training for communities to undertake manta tows and visual fish census. Through undertaking underwater mapping and other land-based participatory resource assessment (PRA) activities, whole communities will understand current situation and historical trends in coral reef and related resources. Projecting the future from this trend, communities will be facilitated to develop strategies for ensuring maximum long-term benefit from the reef and related resources.

*Activity 2.2. Preparation of scientifically supported village Coral Reef Management Plans and inter-village plans legalized by perdes:*

Communities will process the data gathered in the underwater surveys and discuss where optimum sites for various use areas should be located. The District Marine Resources Strategic Plan (see Activity 4.3), the results of the RRI and other available scientific information will be incorporated to ensure local MCA's maximize fisheries benefit/ fishery management requirements and contribute to critical biodiversity conservation. Communities will be encouraged to assign considerable areas of each reef related ecosystem as no-take zones. Support will be given to ensure these areas are viable and contribute to the realization of the district strategy. Many resources are utilized by more than one community, the radio network and community meetings and workshops will focus on resolving user issues to make progress towards the district strategic plan. Agreements made by individual communities in program districts and between communities can be formalized by either locally-binding agreements or the passage of village ordinances (*Perdes*).

*Activity 2.3. Establishment of village sanctuaries supporting district sustainable reef management:*As the initial RRA results are processed and the situation in the district clarified on maps, the field teams will distribute these to the communities and through an iterative process support the development of the District Marine Resource Strategic Plan. This plan will represent a schematic road-map for achieving the maximum sustainable benefit from the reefs and related ecosystems whilst ensuring management of all key biodiversity assets (endemics, high biodiversity areas, key resilient reefs, breeding sites). The program will support the installation of MCA marker buoys and dissemination of MCA coordinates through waterproof schematic maps for fishers, radio announcements, newspaper articles and annual calendars to maximize knowledge and understanding of the areas under management. In key, high-value locations at risk from anchor damage, mooring buoys can be also be supported by the program.

*Activity 2.4. Inventory of fishers, vessels, gear and holding facilities and development of fisheries management:*

In addition to establishing a resilient network of viable MCAs, the program will support the adoption of other reef fisheries management tools in program districts by strengthening the district MMAF offices (Dinas KP). COREMAP Phase II will support the Dinas KP in each program district, and the communities, to optimize fishing effort on the reef ecosystem. In particular, small-scale fishing vessels and gear will be registered to assist communities in regulating access to local coral reef areas especially MCAs. For this reason, the program will provide technical assistance, training and operational support to the Dinas KP agencies in each program district, to strengthen these agencies' capacity to support sustainable co-management of coral reef ecosystems and to register and license small-scale fishing vessels. Through program support for registration, licensing and generating an intrinsic value to these licenses, fishers and DKP will together develop fisheries management on a broader scale.

*Activity 2.5 Pilot decommissioning of destructive fishing gears in selected villages:*

In one area that successfully completes the licencing process, COREMAP will support the controlled decommissioning of gear that although legal is known to be destructive (e.g. reef-based wall nets, compressors, etc). This activity would commence with a study with recommendations that would then be implemented. This pilot activity will be evaluated and if successful (ecologically and cost effective) will become a management tool for COREMAP Phase III.

*Activity 2.6. On-going community monitoring of reefs and associated ecosystems:*

The program will build on successful community monitoring protocols (Reefwatch, RRI, Manta Tows, Visual Fish Census and CREEL surveys) to establish teams of volunteers in each participating village who will be trained to undertake ongoing monitoring activities. Initial training will be given by National CRITC and follow-up support given from District monitoring teams to ensure data is regularly gathered and analyzed within each community to quantify change from management initiatives. One key process indicator is the timely display of this information in the community coral reef information center in each participating village and the level of awareness of the results significance in the participating community. Communities will be encouraged to monitor and protect their MCAs and resolve infringements within existing and traditional social systems.

*Activity 2.7. Collaborative surveillance and enforcement (MCS):*

If communities request support in enforcing their management plan and MCA's COREMAP will support the infrastructure needed to establish communication networks (Activity 1.6.) and a rapid response service. Local MCS unit with existing local law enforcement have access to appropriate vessels to undertake joint patrols and respond to community requests for help. Destructive fishing practices undertaken by non-local fishers exploiting a coral reef ecosystem for immediate and large returns (e.g. large fish catches from bomb fishing) will be addressed through this response service to increase the effectiveness of local management. This activity will support a cost-effective and decentralized system of surveillance and enforcement in each program district, whereby appropriate local government authorities are equipped with response boats and communications to respond to community-based Reef Watchers. These Reef Watchers will maintain fishing logbooks and also note illegal fishing activities, reporting them to local authorities. In areas where destructive fishing is highly institutionalized, as needed a National MCS assistance team comprising senior officers from Directorate General PSDKP MMAF and when needed officers from other relevant enforcement agencies will be deployed to ensure resolution of distribution chains.

*Activity 2.8. Strengthen and expand community based management areas:*

The program will offer additional support to communities opting to increase the area under management. This support will include additional resources for facilitation, marker buoys, legal drafting and socialization of the changes in managed areas. Through this iterative process it is expected that each program district will move towards realization of the District Marine Resource Strategic Plan.

**Sub-Component (3) Community Development (\$9.0m)**

The objective of this sub-component is to ensure that coastal communities' incomes are increased and diversified through transparent, accountable and financially viable livelihood opportunities with greater access to capital. Toward this objective, the second phase program will fund technical assistance, village block grants for (i) village improvements and (ii) village revolving funds. More specifically, activities in this sub-component will include provision of skills and activities that contribute to a general improvement in welfare in the target communities. These activities will be implemented to encourage/reward concrete steps undertaken by communities towards achievement of the District Marine Resources Strategic Plan, MCA establishment, community-based monitoring and other COREMAP Phase II goals. Specific activities will include:

*Activity 3.1. Establish and operate village financial management system to manage public funds:*

The program will support the strengthening of village financial management systems in two ways. Existing financial managers/bookkeepers and other community members who are assessed as having potential will be selected to attend basic training in money management and test for accreditation. Candidates that show potential will be further trained to expand existing micro-finance management systems through BMTs/LKMs or other similar institutions (see Activity 3.2).

*Activity 3.2. Provide technical support to well-functioning BMTs/LKMs (or similar institutions) to establish a village branch in participating villages:*

The program will provide incremental support to existing District-based BMTs/LKMs or similar institutions (financial intermediaries) that are appraised as well-functioning and financially sustainable. The support will allow these financial intermediaries to provide technical assistance to program villages, in coordination with program facilitators, to set up village branch BMTs/LKMs or similar institutions. BMTs/LKMs are faith-based credit/savings institutions that mobilize savings among members for productive income generating and social benefit purposes. Thus, village branch BMTs/LKMs will serve as credit/savings facilities for participating program villages. COREMAP Phase II boats and communication systems (i.e. radios) will be the primary mechanisms used to deliver technical support to communities to undertake savings and credit systems.

*Activity 3.3. Support in the form of a village grant for revolving credit/savings facility in each participating village for livelihood and income generation activities:*

Once village savings and credit systems are established and operating, program resources can be applied to viable groups (i.e. small micro-enterprises) on a revolving basis and through a subsidiary loan from the participating village to the village BMT/LKM which is on-lent to the micro-enterprise. Sub-loans from the participating village must not exceed 40% to any single village BMT/LKM. Moreover, BMTs/LKMs would on-lend to small enterprises for alternative income generating activities and no more than 40% of the sub-loan to a BMT/LKM can be used to on-lend to a single micro-enterprise. Micro-enterprises would be eligible for securing a loan through the BMT/LKM and from the Village only if the proposed enterprise was income generating and directly or indirectly took pressure off the coral reefs and associated ecosystems. A target of 30% involvement of women is set for all COREMAP Phase II activities including staffing, trainings and specifically revolving funds and alternative income generating activities. Each participating village will receive a grant of Rp. 50,000,000 for this purpose.

*Activity 3.4. Pilot Credit Guarantee Scheme to Increase Community Development Impact:*

It is likely that over the program implementation period, village micro-enterprises may require more capital than the village facilities can provide. Studies suggest that village-based micro-enterprises in project areas have limited and oftentimes no access to private credit due to market failures and this is one reason for (i) limited economic growth in coastal areas and (ii) engagement by coastal communities in income generating activities that are destructive to coral reefs and associated ecosystems (blast and poison fishing). In an effort to overcome this constraint, the borrower would establish a pilot credit guarantee scheme to increase access to private capital for coral reef dependent communities that have limited or no access to private capital due to market failures. The partial credit guarantee scheme would provide a local rural bank with such guarantee so that the rural bank could lend to small enterprises at a lower interest rate. The guarantee scheme would be implemented on a pilot basis in at least three pilot districts (Pangkep, Selayar, and Sikka) and financed by GOI as counterpart contribution to the Bank loan/credit. Moreover, there is provision to assist District and village-based credit/savings facilities to utilize the technical expertise of the International Finance Corporation (IFC)-supported business development facilities in Indonesia (PENSA), in order to issue such partial credit guarantees and assist local small and medium enterprises to grow.

*Activity 3.5. Technical support to review, revise and implement proposed income generation activities:*

The program will support alternative income generation (e.g. income-generating activities which provide an alternative to fishing and extractive uses of the coral reef ecosystems) in the communities in program districts. More specifically, through this activity the program will focus on the provision of technical support from the private sector to assist in the analysis of alternative income generating activities. Community initiatives analyzed as viable, from economic, environmental and marketing aspects and not contrary to the safeguards policy may be supported with longer term technician level support. As long as business plans can demonstrate viability, including paying-back initial investment and sustainability, programs such as village power, drinking water or small scale industry that does not conflict with safeguards policy could be provided technical support. In order to coordinate the alternative livelihood activities of this sub-component, the program will also provide additional technical assistance through a Business Development Service Officer who will work with each (6) district, on an as needed basis through each PMU to ensure that alternatives are available as villages begin to reduce reef fishing effort. The objective of this assistance would be to provide (i) the minimum level of training to new enterprises in the technical aspects of production (e.g. seaweed farming), and (ii) training in preparation of a business plan to guide the enterprise and to facilitate applications for credit, training on management of cash flow and accounting, marketing and sales.

*Activity 3.6. Block Grants for Village Improvement:*

The program will provide block grants (approximately up to Rp. 50,000,000 (\$5,000) per village) to each participating village for social goods purposes agreed to by the community through a consultative and highly participatory process led by Community Facilitators (e.g. small-scale infrastructure, etc.). These grants are awarded to communities subject to ratification of coral reef management plans (see Sub-Component 2).

*Activity 3.7. Provision of income opportunities outside program village pilots.*

The program will support employment agents from each program district or Provincial capital to make periodic visits to remote island communities. During these visits they will look for work opportunities suitable for fishers and reef gleaners. At mid-term review, this activity will be evaluated to estimate the results and an assessment made of its cost effectiveness.

*Activity 3.8. District Block Grant.* Approx. Rp. 300,000,000 per year up to 4 years, not exceeding 1,200,000,000 per district to lend to small and medium size entrepreneurs to undertake pilot alternative income generating (AIG) activities that would directly generate income for project beneficiaries in project areas and reduce pressure off the coral reefs and associated ecosystem, and in accordance to the guidelines provided in the Operational Manual

**Sub-Component (4) District Marine Conservation Area (MCA) Management (\$7.8m)**

The objective of this sub-component is to ensure that all participating district governments are strengthened and equipped to effectively support MCAs through co-management of coral reef and associated ecosystems. Toward this objective, the second phase program will fund technical assistance and operational support to establish and maintain district-level boards, as well as a PMU in each district. In addition, this sub-component will also fund village baseline reports and surveys in each district in order to create a District Marine Resources Strategic Plan, as well as pilot programs to train villages to sustainably capture live reef species. Specific activities will include:

*Activity 4.1 Support to formally establish and maintain District Coastal Community Empowerment Boards .* Within each targeted district, the program will support the establishment and operation of Coastal Community Empowerment (CCE) Boards or similar agency (eg: Dewan Maritim Daerah) consisting of policy-makers and stakeholders in the coral reef ecosystems. These CCE Boards will be responsible for consensus-building and policy-making to support co-management of coral reef and associated ecosystems. Each CCE Board will be chaired by the head (Bupati) of the district and composed of about 20 members, about half of which will be drawn from civil society. The Bupati's office would issue the invitation to the quarterly board meetings. The Board will undertake a range of responsibilities including:

- Provide input to district policies and strategies;
- Review and endorse proposed annual workplan of the PMU, prior to submission to the local legislature (DPRD);
- Provide recommendations for implementation of COREMAP Phase II activities;
- Analyze progress and public opinion concerning COREMAP Phase II;
- Provide input for revision of district strategic plans as related to the COREMAP Phase II Program;
- Coordinate and mobilize local government support;
- Supervise effective procurement for goods and services at the district level;
- Coordinate with other related projects and programs;
- Monitor district implementation progress; and
- Provide management information to the DPRD.

*Activity 4.2 Establish District Program Management Units (PMUs) to Support Co-Management.* The implementation of program activities within the districts, under the direction of the CCE Boards, will be undertaken by a PMU established within the local government in each program district. These PMUs will have coordination, procurement, implementation and monitoring functions, and will be provided with technical assistance, equipment and operating support under this activity of the program. The community extension program of Sr. Extension and Training Officers (SETOs), Community Facilitators (CFs) and Village Motivators (VMs) will be managed through the PMU, as well as assisting the district with the identification and establishment of a network of effectively managed MCAs. The PMU will likely be active over a 3.5 year period, longer in districts phasing in-field activities.

*Activity 4.3 Develop a District Marine Resources Strategic Plan and Establish MCA Network.* This activity will support the PMUs in each (6) district (and Dinas KP), under the direction of the CCE Board, to create a District Marine Resources Strategic Plan to guide villages in the selection of MCAs and build towards a network of community-based MCAs that would achieve the program objective of having no take zones cover 10 percent of district reefs by 2010. This Plan would be based on the district reef health monitoring (RRIs/LITs), village participatory resource assessments and other ecological and socioeconomic information, and would include fishing grounds, fishery type, season, users and status, current knowledge on status of the reefs, spawning and nesting sites, migratory routes for fish and marine mammals, reefs utilized by fishers and other private sector, fishing communities by size level of technology used and dependence on fisheries, destructive fishing communities and fishing facilities, ice plants, and processing plants markets. The Plan would be drafted in map form and socialized throughout the district, so that village-established MCAs would be selected based on broad parameters set by the Plan and map (i.e. broad areas highlighted as potential areas for location of MCAs), in order to ensure that these MCAs will generate the fishery benefits the Phase II Program aims to achieve. The Plan will also include guidelines to assist villages in the selection of and establishment of MCAs, in order to maximize the potential benefits.

*Activity 4.4 Establish Sustainable Management of Certified Live Reef Species Trade in Two Pilot Areas, Spermonde Islands and Buton.* Capture of live reef species (for live reef food fish markets and for live reef aquarium species markets) constitutes one of the most valuable and readily available export commodities generated by small-scale coral reef fisheries in many of the sites for COREMAP Phase II. While the trade in live reef food fish products and live reef aquarium species products represents a tremendous opportunity for coastal communities, in many cases it can also present a tremendous threat to the sustainability of the resources, both in terms of encouraging overfishing, and the use of reef-damaging cyanide in the capture of live species. In terms of the live reef food fish trade, available program documentation suggests that any attempts to address the sustainability of this industry will be unlikely to succeed without changing the incentive structure so that the market pays a premium for cyanide-free and sustainably harvested live reef food fish. For this reason, the program will focus on two pilot districts for the first three years of Phase II and document the nature of the trade in these areas, detailing every aspect of the supply chain from the collectors

to the importers, in order to plan long-term measures that could be implemented after mid-term of the program. More specifically, the program will support: in-depth assessment of the live reef food fish trade in two pilot districts (Pangkep and Buton) to advise the development of a comprehensive program to change the incentive structure of the live reef food fish trade (see Component 1, Activity 3.5).

In terms of the live reef aquarium trade, the program will support collaboration with the GEF-funded Marine Aquarium Market Transformation Initiative (MAMTI). The MAMTI project aims to operate in the two COREMAP II districts of Buton and Pangkep, linking fishers and collectors sustainably harvesting live aquarium species to premium export markets through certification by an independent third party. In order to take advantage of this livelihood opportunity for coastal villages, the program will support the following activities to create an enabling environment for fishers and collectors in Buton and Pangkep to produce certified live aquarium products for premium prices: (i) reprinting and distributing certification education materials produced by MAMTI, (ii) contracting MAMTI capacity-building teams to train interested fishers and collectors in sustainable harvesting, handling and transport methods, and (iii) conducting a cyanide detection methodology survey, including developing sampling protocols for live reef specimens. Through a GEF partnership arrangement between COREMAP Phase II and MAMTI, the MAMTI would earmark funds to work along side Phase II financed technical assistance to meet these objectives.

### **Sub-Component (5) Marine Park Support (\$4.2m)**

The objective of this sub-component is to ensure that each participating marine park/protected area authority is strengthened and equipped to effectively engage in collaborative management. Toward this objective, the second phase program will fund technical assistance, management and enforcement equipment and operational support, study tours and learning exchanges, and training workshops. Specific activities will include:

*Activity 5.1 Strengthen PHKA Capacity to Support Co-Management of Marine Protected Areas.* Through this activity, the program will provide technical assistance, equipment and operational support for PHKA to implement a national policy for co-management of marine protected areas.

*Activity 5.2 Learning Exchanges between Marine Park Managers.* There are individual examples of national marine parks that have successfully implemented co-management systems for the coral reef ecosystems within the park (e.g. Bunaken National Marine Park, Komodo National Marine Park), to the benefit of the both the welfare of coastal communities near or within the park as well as the health of these reef ecosystems. For this reason, the program will support learning exchanges for managers of marine parks to conduct study tours of these successful examples, effectively establishing them as centers of excellence.

*Activity 5.3 Strengthen National Marine Park and KSDA Co-Management.* In all of the six program districts, there are marine protected areas established as either National Marine Parks or smaller marine protected areas (KSDAs). In each case, the program will support the park management authorities to strengthen their capacity to sustainably manage the coral reef ecosystems within the park in collaboration with the local communities and stakeholders. The program will provide support for formation of advisory boards, training, technology and collaborative enforcement support to each National Marine Park/KSDA, as well as assistance to review, revise (if necessary) and socialize park management plans throughout the area using participatory techniques to ensure that local communities and stakeholders feel a sense of ownership in the management of the park's coral reef ecosystem resources.

## **Component 3. Public Awareness, Education and Sea Partnership**

*(US\$13.0 million—total cost including contingencies)*

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The objective of this component is to promote societal awareness of the benefits of coral reef ecosystem conservation and sustainable use that leads to behavioral change. Behavioral change is realized through a phased process of information dissemination, knowledge growth, concept approval and acceptance, intention to act, behavioral change and advocacy to others. Public awareness activities are designed to support the Phase II program and fully integrated into the Program as a whole. There are four sub-components envisaged:

### **Sub-Component (1) Public Awareness Campaigns (\$3.3m)**

The objective of this sub-component is to support behavioral change for sustainable coral reef co-management through provision of public awareness materials, campaigns and advocacy at the international, national, provincial, district, sub-district and village levels. Toward this objective, the second phase program will fund the production and provision of awareness materials and technical assistance and operational support for awareness and advocacy campaigns. Campaigns will be crafted to illustrate a direct benefit between coral reef health and sustainable fisheries production. This will encourage responsible management coral reefs and related ecosystems, decrease the incidence of poverty in program areas and improve community welfare. Specific activities will include:

*Activity 1.1 Support to Reproduce or Modify and Disseminate Existing, Successful Materials to Program Provinces, Districts and Villages.* Public awareness under Phase I produced a wide range of excellent, award winning materials. Examples include educational games, mascots (Uka/Iki), radio and music spots and TV ads. In addition, other donor projects (e.g., USAID's NRM and Project Pesisir, ADB's MCRMP and COFISH, etc.) and NGOs (e.g., TNC, CI, WWF, IMA, MAC, etc.) all have excellent awareness products. In most all cases, these development partners are enthusiastic to share their materials. After consultation with development partners and LIPI, the DKP awareness team will develop a selection matrix and then using the matrix choose materials for reproduction and distribution to program areas. Focus will be on program districts and villages, as well as provinces. Districts new to the program can especially benefit from Phase I and other messages, which can be disseminated at Phase II inception.

*Activity 1.2. Create, Produce and Disseminate New Materials Supporting Co-Management and its Reef-Fisheries Benefits to Program Provinces, Districts and Villages, and at the national level.* New public awareness materials will focus on behavioral change outcomes in key target groups at district and village levels (e.g., fishers, resource users, decision makers, etc.) rather than general awareness raising. Carefully tailored messages provided through selected channels will be developed to reach specific target groups based on backgrounds and interests. Materials will be largely created and produced at the districts with support, as needed, from the national level. New materials will be designed for distribution through a range of mediums. Much of the new material will be acceptable for use outside the confines of program areas, extending even to international forums.

*Activity 1.3 Establish and Operate Provincial, District and Village Awareness, and also at the national level and Advocacy Programs.* Public awareness activities are fully integrated into the program. For example, public awareness will be designed to help position MCS as a helpful tool to protect vulnerable resources. Also, an official Phase II launch will take place at each level with a 'kick-off' designed to coincide with an event of local importance. The 'kick-off' will be supported by provision of materials to all local media. Thereafter and throughout the implementation period, technical support and infrastructure will be provided to allow for implementation of public awareness activities at the provincial, district, sub-district and village levels. Awareness materials will be distributed through a range of mediums including events, games, dances, competitions, displays, billboards, print, radio, video and television. Materials will be produced at the level closest to communities commensurate with capacity. Special programs will be designed to involve destructive fishers, vulnerable groups and migrant fishers from outside Phase II districts, who utilize marine

resources inside program areas. Special emphasis will be given to advocacy at all levels to government, religious, traditional and cultural leaders, NGO's, law enforcement agencies and the judiciary. National and district baseline studies will be conducted through an independent research company and repeated every two years.

*Activity 1.4 Support to Independent Journalists and Media.* Phase II will provide contracts to local media and Association of Independent Journalists to produce news and general interest stories for national and local consumption, which promote sustainable management of coral reefs and related ecosystems and highlight program success. It will also serve as an important part of independent monitoring of the program activities and the impacts on beneficiaries.

### **Sub-Component (2) Education Programs (\$4.2m)**

The objective of this sub-component is to insure that coral reef conservation and sustainable use is mainstreamed into participating Districts' education systems. Toward this objective, the second phase program will fund teacher trainings, development and production of education materials and education events. Specific activities will include:

*Activity 2.1 Develop and Produce Coral Reef Education Materials for Inclusion into the Formal Primary and Secondary Education Curriculum in each Program District.* Phase II will continue the work begun under Phase I by LIPI with the Department of Education to develop local education packages for school classes I to VI. Materials are currently under development at the national level and when complete will be distributed to program districts for inclusion under their local content programs. Assistance is provided to ensure the expanded vision of Phase II is presented in the curriculum.

*Activity 2.2. Program District Teacher Training.* After local content materials are available, workshops to train district teachers in use of the materials and methodology will be provided. Credit points will be awarded to the teachers who attend these workshops. Teacher workshops will be carried out in the inter-year break. Student books, teacher manuals and posters will be distributed ready for all interested coastal schools/students. The CF's and VM's will support the implementation of this education program in the community, insuring teachers undertake the field programs and homework components as well as the class-based components of the training.

*Activity 2.3 National Reef Education Events for Children and Youth.* Building on the success of national educational activities from Phase I such as *Duta Karang* (Reef Ambassador), *Innovator Muda* (Young Innovators) and *Forum Matabuka* (Scientific Communication Forum), Phase II will continue and expand national reef education events to include the new district participation. Students from each district will be encouraged to participate in the national educational activities, which will give them exposure to the national level.

### **Sub-Component (3) Sea Partnership Program (\$5.3m)**

The objective of this sub-component is to pilot a system to provide technically qualified human resources to program districts to support collaborative management. Toward this objective, the second phase program will fund technical assistance and operational support for a National Sea Partnership Office, faculty secondments, education scholarships and practical field studies for students. Specific activities will include:

*Activity 3.1 Establish National Sea Partnership Office.* A central Sea Partnership office will be established and supported at MMAF. It will provide information first to program districts, and if successful in the future all coastal districts, about programs and services available under the Sea Partnership program. Requests for Sea Partnership support will be forwarded from applicants (e.g., individuals, districts) to the national office. The national office will match requests with available resources.

*Activity 3.2 Advisory Services.* Under the Program, support is given for intermittent use of specialized foreign and domestic expertise to prepare a detailed design and implementation plan (including an operational manual) to support activities defined under this component and to assist the Government in effectively coordinating, managing and implementing the partnership program. Similarly, a sustainability plan will be prepared by the advisory service to suggest ways to support the Sea Partnership Program after Phase II completion. A technical assistance budget is provided for these advisory services over the first three years of operations. Expectation is that the services will be used to bolster the Sea Partnership program especially in the areas of institutional support, design of initial programs and unique technical needs. Initial determination of expertise required will be made by MMAF Sea Partnership management in concert with the Sea Partnership Advisor.

*Activity 3.3 University Faculty Seconded and Placed in Districts to Support Program Activities.* Phase II will seek to enhance the capacity of district government agencies (i.e., Dinas KP, Bappeda, KSDA, Tourism, etc.) through technical assistance from university faculty. The rapid pace of decentralization has granted many responsibilities to district governments without sufficient time to develop the necessary human resources. At the same time, the nation has many talented university staff whose work is confined primarily to academic research. The Sea Partnership program will link university skills with district needs. A budget is provided to hire university faculty with expertise in coral reef related ecosystem management and dispatch them to requesting districts. The university faculty will work in a part time capacity at the Dinas during those times of year when free from university responsibilities.

*Activity 3.4 Secondary, University and Graduate Scholarships and Post-Education Placement to Support Program Activities.* Scholarships will be provided to students whose central theme of studies is coral reef and related ecosystem management or related topics. After completion of studies, secondary graduates will have the option to work in program villages with VMs, university graduates with program districts' in PMU sanctioned activities and post graduates with program-related government agencies.

*Activity 3.5 Responsive Research.* The Program will help support the development at 5 Eastern Indonesia universities/research stations of marine related "think tanks". These "think tanks" will undertake research in response to requests from Program stakeholders. The national Sea Partnership will provide information to Program stakeholders about the responsive research program. Requests for responsive research will be forwarded from the Program stakeholders to the national office. The national office will match requests with "think tank" expertise. The chosen institution will then undertake the research and send the results to both the requesting stakeholder and the national Sea Partnership office.

*Activity 3.6 Expansion of Existing Practical Field Training Program to Support Village-Based Program Activities.* University students, under the Practical Field Training program (*Praktek Kerja Lapangan* (PKL)), spend approximately 4 months in a village performing community work. The COREMAP Phase II program will make use of the existing PKL program to include practical field training of students to promote sustainable coral reef management in program villages through the provision of fellowships. Students who have majored in appropriate fields (e.g., fisheries, biology, community development, etc.) and have already developed plans for field programs appropriate to coral reef and related ecosystem management will be selected to participate. The activity will be managed through the existing PKL structure with coordination by the national Sea Partnership office. Each student, their practical field training program and the village selected will need approval by the national Sea Partnership office. The PKL students will undertake their field programs in COREMAP II program villages and then draft reports and disseminate results. PKL students will also carry with them and show the COREMAP II program's self-learning videos and information packets.

#### **Sub-Component (4) Program Support Communication (\$0.2m)**

The objective of this sub-component is to ensure that program philosophy, objectives, activities, outputs and outcomes are effectively communicated to all program staff, partners and key stakeholders. Toward this objective, the second phase program will fund technical assistance and the production of communication materials. The intention is to create a common and clear understanding of the COREMAP Phase II program. Specific activities will include:

*Activity 4.1 Phase II Communication Protocols (Vision, Logos, Branding, Letterhead).* Phase II institutions will develop the methodologies, protocols and systems to most effectively use existing program materials. Issues such as which materials are most effective, copyright rules and institutional responsibility will be defined. The Phase I logo will be retired and revised to incorporate better “Feng Shui” principals. A decision will be made on translating the program name into Indonesian. Also special communication materials including information kit and press releases will be developed.

*Activity 4.2 Media Training for Key Program Representatives.* Special strategic public relation activities including lobbying, interpersonal approaches, courtesy calls, media and advocacy workshops are provided for all Phase II managers at the district and national levels to clearly announce the vision, mission and goals of Phase II.

*Activity 4.3 Internal Communication System.* Communication protocols for internal program management and provision of materials including information kit and press releases developed to address any important and sensitive issues arising from program implementation. Essentially, this is an informational system to respond to Phase II questions, comments, concerns and criticisms.

*Activity 4.4 Info-Sheets and Newsletters.* Information sheets and newsletters specifically explaining the program’s vision, mission, structure, benefits and activities will be produced and disseminated.

*Activity 4.5 Public Relations to Generate a Clear and Common Understanding of Phase II Program to Targeted Audiences.* A comprehensive public relations program to explain COREMAP Phase II goals, objectives and activities is included. The aim is to create trust, support and commitment from stakeholders and partners at all levels.

## Technical Annex 5: Phase II Project Costs

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

The total cost of the Project is estimated at US\$74.3 million equivalent, comprising US\$9.8 million in foreign exchange and US\$64.4 million equivalent in local currency. The estimates include the provision of US\$6.7 million equivalent in taxes and duties. The total cost to be financed is \$74.6, with includes the Bank's front-end fee. A summary of the project cost estimates is given in the table below. A complete set of detailed cost estimates appear the program files.

Indonesia

COREMAP Phase II Project (WB/GEF)

**Components Project Cost Summary**

	(US\$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total		
<b>A. Institutional Strengthening</b>					
1. Program Coordination, M&E and Training	7,084.2	2,051.3	9,135.5	22	13
2. Coral Reef Research and Monitoring – CRITC	5,943.4	1,031.0	6,974.4	15	10
3. Legal, Policy and Strategy Assistance	425.4	42.1	467.5	9	1
<b>Subtotal Institutional Strengthening</b>	<b>13,453.0</b>	<b>3,124.4</b>	<b>16,577.4</b>	<b>19</b>	<b>24</b>
<b>B. Community Based and Collaborative Management</b>					
1. Community Empowerment	12,493.5	1,528.7	14,022.2	11	20
2. Community-Based Resource Management	4,964.2	1,590.6	6,554.8	24	9
3. Community Development	10,004.6	116.1	10,120.7	1	14
4. Marine Conservation Area Management	6,395.9	760.5	7,156.3	11	10
5. Marine Park Support	3,278.1	453.8	3,731.9	12	5
<b>Subtotal Community Based and Collaborative Management</b>	<b>37,136.3</b>	<b>4,449.7</b>	<b>41,585.9</b>	<b>11</b>	<b>60</b>
<b>C. Public Awareness, Education and Sea Partnership</b>					
1. Public Awareness Campaigns	1,586.2	1,508.5	3,094.7	49	4
2. Education	3,853.4	110.6	3,964.0	3	6
3. Sea Partnership Program	4,459.1	44.0	4,503.1	1	6
4. Program Support Communications	75.5	76.6	152.1	50	0
<b>Subtotal Public Awareness, Education and Sea Partnership</b>	<b>9,974.2</b>	<b>1,739.7</b>	<b>11,713.9</b>	<b>15</b>	<b>17</b>
<b>TOTAL BASELINE COSTS</b>	<b>60,563.5</b>	<b>9,313.8</b>	<b>69,877.2</b>	<b>13</b>	<b>100</b>
Physical Contingencies*	138.9	189.5	328.4	58	0
Price Contingencies**	3,729.8	315.6	4,045.4	8	5
<b>TOTAL PROJECT COSTS</b>	<b>64,432.2</b>	<b>9,818.9</b>	<b>74,251.1</b>	<b>13</b>	<b>105</b>
Front-end Fee***	0.0	329.0	329.0	100	1
<b>TOTAL COSTS TO BE FINANCED</b>	<b>64,432.2</b>	<b>10,147.9</b>	<b>74,580.1</b>	<b>14</b>	<b>106</b>

\* Estimated at 6 percent of base costs for goods/equipment.

\*\* Calculated on the basis of a PPP exchange rate over the project period with US\$1.00 = Rp 8,500 during data collection, a US\$ inflation of 2% and a Rp. inflation of 8.0% over the entire project period.

\*\*\*Calculated on the basis of 1% of the total amount borrowed from IBRD. Total IBRD applied to this project is approximately \$32.9 million.

## Annex 6(A): Procurement Arrangements

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### Procurement

##### 1. Procurement Capacity Assessment.

The last Country Procurement Assessment Report for Indonesia was issued in February 2001. With respect to this project, a separate Procurement Capacity Assessment Report (PCAR) has been prepared with the following summary:

- (i) There are a few large consultant contracts and procurement of goods/equipment at the central level (procured by the National Coordination Unit, the Ministry of Marine Affairs and Fisheries (MMAF/DKP), and the National Project Implementation Unit (NPIU) (i.e., National Science Institute/LIPI) and Project Management Units (PMUs) at the district level. The procurement of good / equipment for KSDA through PMU in coordination with KSDA. The NCU also will procure goods / equipments for National Parks. Expenditures will be made by PMUs at the district level and communities at the village level. This PCAR was prepared based on an assessment at the central and district government levels only since specific communities have not yet been selected at the time of the assessment.
- (ii) Based on experience in the previous project (COREMAP Phase I, LN 4305-IND), the following is observed:
  - a. The capacity of MMAF and LIPI (as executing/implementing agencies at the central level) in carrying out procurement is low. There are individuals within those organizations, who are procurement proficient, however, it is unclear whether those staff will be taking the role of supervising or carrying out procurement.
  - b. In COREMAP Phase I, most of the contracts were carried out at the central level, the contract packages were of large, and mostly involved the recruitment of consultants and purchases of equipment for the entire Project. This, coupled with high turnovers of the procurement team members, resulted in a number of significant procurement delays.
  - c. The required procurement documents could have been more clearly defined and documented upfront to the respective implementing agencies.
  - d. The inspection of the delivered goods/equipment did not include a sufficient level of physical testing, and therefore, in some cases, it was very difficult to verify the conformity of the goods/equipment with the technical specifications.
- (iii) The capacity of the district governments in carrying out procurement is also very weak. They are only experienced in carrying out simple procurement following Keppres 18/2000, and are unfamiliar with the newly issued Keppres 80/2003, and they are not familiar with procurement under foreign financed projects. From the Bank's experience in dealing with community based procurement, it is very likely that the community under this Project will lack the experience of carrying out procurement or managing expenditures. GOI will ensure that, during implementation, these community groups will have adequate capacity to carry out procurement according to procedures contained in the project manuals (Project Management Manual, and an Operations Manual).
- (iv) To minimize procurement and corruption risks, the following actions have been agreed:

- (1) The NCU, NPIU and DKP will be responsible for procurement at the central level. Therefore, at least one procurement qualified person at LIPI, and two people at DKP will be included in the implementation team. These procurement proficient staff will be retained in the Project up to the completion of the Project, and changes of procurement staff will be subject to the Bank's review.
- (2) A Procurement Report for the entire Project will be prepared and submitted to the Bank as part of FMR, in which the procurement delays will be closely monitored. There will be a Project Management Manual and an Operations Manual to streamline all required procedures and requirements under the Project, including procurement. It is expected that these documents will be issued as part of the Ministry of Finance's decree, DG Budget, and therefore will serve as an adequate anchor for enforcement at the implementing agencies. Prior to the Loan Effectiveness, the Bank will also provide a special session for procurement training for the staff of implementing agencies.
- (3) There will be a procurement qualified person placed in the District PMU, who will be involved on day to day basis in carrying out procurement, and will provide monitoring and assistance to the communities in carrying out procurement. This person will be hired by the PMU and as part of the TA Team for assisting a particular district.
- (4) NCB contracts of value less than equivalent US\$ 100,000 carried out by the District PMU, which are not subject to the Bank's prior review, will be post reviewed by NCU. In addition, a specific technical audit firm will be hired to randomly verify the quality of the goods/services delivered by the community, as well as those procured by the NCU, NPIU and DKP. The TOR for the said firm will be agreed with the Bank prior to Negotiation.
- (5) The TOR and qualification of the members of the inspection team will be agreed with the Bank prior to Negotiation.
- (6) Specific provisions on NCB will be included in the legal documents. These provisions will serve as the basis for conditions for the use of Keppres 80/2003 in place of NCB.
- (7) The procuring units may also follow the Keppres 80/2003 "Pemilihan Langsung" procedures in place of the Bank's shopping procedures, subject to the clarification as will be included in the Minutes of Negotiation.
- (8) All contracts and expenditure carried out by the community are required to be announced in a public domain, and at a minimum level, in the public meeting at the respective villages.

The Assessment also found that the overall procurement risk is **high**. The prior review thresholds, as indicated in this Annex, are based on this capacity assessment.

## 2. Guidelines

Procurement of consultants shall follow the *Guidelines for Selection and Employment of Consultants by World Bank Borrowers* edition of November 2003 (**the Consultant Guidelines**). Procurement of works, goods, and related services funded wholly or partly by the World Bank in this Project shall follow the *Guidelines for Procurement under IBRD Loans and IDA Credits* edition of November 2003 (**the Procurement Guidelines**).

### **3. Procurement Plan, Strategy, and Standard Documents**

A draft Procurement Plan for the First 18 Months providing a timeline for each step of the procurement for the first 18 months of implementation has been included in the Project Management Manual (PMM). This Procurement Plan will be updated annually (including one carried out by community), and will require the Bank's prior no objection by end of October each year.

A Project Management Manual (PMM) - streamlining the procedures for various implementing agencies in managing the project, and an Operations Manual (OM) – streamlining procedures and requirements for carrying out the implementation of project - is developed in draft and will be agreed with the Bank prior to Negotiations. Both Manuals constitute as Project Manuals. The following documents will be used and attached to the PMM, and agreed with the Bank prior to negotiation:

- (i) The Bank Standard Bidding Documents (SBD) for Procurement of Goods ( January 1995, Revised March 2000, January 2001, March 2002 and March 2003) for contracts under International Competitive Bidding (ICB) procedure;
- (ii) The Bank Sample Bidding Documents<sup>16</sup> for Procurement of Goods in Bahasa Indonesia ( Edisi Percobaan, December 2003 ) for contracts to procured under National Competitive Bidding (NCB) procedure;
- (iii) The sample Request for Quotations in Bahasa Indonesia, for contracts to procured under National Shopping;
- (iv) The Bank's standard Request for Proposals Selection of Consultants (July 1997, Revised April 1998, July 1999, and March 2002) for contract values more than equivalent US\$ 200,000; and
- (v) The Bank Sample Request for Proposals for Selection of Consultants<sup>1</sup> for contract values less than equivalent US\$ 200,000.

### **4. GOODS/EQUIPMENTS/SERVICES (US\$ 6.2 million Equivalent)**

The goods/equipment/services to be purchased under the Project includes the office furniture and equipment (computers, audio visual equipment, mobile telephones, UPS, photocopy machines, office furnishings, etc) to support the establishment and operation of NCU (including its National Monitoring Evaluation and Feedback Unit/NMEF), and to support the operation of LIPI, DKP and Ditjen PHKA (at the Ministry of Forestry). NCB procedures will be used for fisheries management kits, self learning materials and production of television spots. In addition, there will be procurement of cyanide detection minilabs, with portable equipment to detect residual cyanide or blast. Procurement of these minilabs will follow NCB procedures. Other items are expected to be small, not to exceed US\$ 50,000 equivalent per contract, and therefore shopping procedures will be followed.

LIPI will also need to develop and print some information materials, and to contract out for CRIMS Application for development, implementation and maintenance of web-based CRMIS applications; including technical support for network infrastructure. Except for Printing and Dissemination of Formal Educational Materials (which is of large contract), the procurement of others will follow Shopping or NCB procedures acceptable to the Bank.

LIPI will also be responsible for procurement of equipment for the CRTIC office at the national level.. This would include the procurement of broadband data communication equipment and related network software, photocopy machine, and other office furnishings. These contracts will be divided into several packages based

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<sup>16</sup> Developed by World Bank Office, Jakarta

on practicality, and due to small value (less than USD 50,000 per package) the procurement will follow shopping procedures.

At the district level, the District PMU will manage and carry out the procurement, including contracts through the following units:

- (i) Procured by the District PMU: Purchase of office equipment, local CRITC equipment, small FM stations and dive equipment rental agreements. The single contract package for these items runs from US\$ 30,000 equivalent up to a maximum of US\$ 140,000 equivalent.
- (ii) In addition to the above, the District PMU will also procure equipment for the Collaborative Surveillance and Enforcement (MCS) Unit of each district: response boats, MCS equipment and other parts of equipment. The single contract package for the procurement by this Unit is from US\$ 8,000 up to US\$ 160,000 equivalent.
- (iii) Procured for the KSDA of each district: simple materials of the existing equipment (the contract package is expected very small, less than US\$ 10,000 equivalent), and Park management equipment, which includes: radio, ultra-light aircraft services contract, boats, and observation posts. The contract packages for this equipment is expected to run from US\$ 30,000 up to US\$ 150,000 equivalent.
- (iv) Procured by the District Park Authority under the jurisdiction of the Directorate of Protected Areas (PHKA), within Ministry of Forestry: for small materials with an aggregate amount of equivalent to US\$ 10,000.
- (v) The District PMU will also print and distribute leaflets and other coral reef public awareness and education materials, which are expected to be very small contracts less than US\$ 50,000 each.

There will be a large procurement of goods/equipments under ICB procedure to be carried out at the central level for the first 18 months of the Procurement Plant as follows:

NCU will procure radio system, district boats and trailers (whose total estimated amount is equivalent US\$ 1.7 million) to be distributed to the district levels, whereas LIPI will procure printing and dissemination curriculum materials for the formal education (whose total estimated amount is US\$ 0.8 million equivalent).

Except for QCBS and IC for consulting services, procurement by the District PMUs will follow NCB procedures and Shopping.

## **5. Procurement of Subprojects under Community Based Management (US\$ 9.4m equivalent).**

Procurement, which will be carried out by Community, includes the following:

- (i) Village workshops
- (ii) Establishment/rehabilitation of Information Centers for Coral Reef Management in each Community
- (iii) Detailed Village Resource Assessments through Participatory Rural Appraisal
- (iv) Purchase of the Marine Conservation Area (MCA) markers, installation costs of markers, and markers maintenance.

Agreement between the District PMU and the Community will be governed by a contract, which is standard and found in the project manuals. Prior to signing the Agreement with the Community, the District PMU will ensure that the Community are technically capable, and therefore, the contracts will include the type and frequency of technical supervision by the District PMU verifying the quality of the works/goods/services performed by the community. For this purpose, an annual technical audit will also be performed by a reputable firm hired by the NCU. Procurement will be managed by communities using forms and procedures

that will be agreed with the Bank, and included in the project manuals. The NCU will also hire consultant firms to assist the District PMU in monitoring the contracts implemented by the community, and also to assist the community. This consultant firms will be hired by procedures as described separately under “Technical Assistance” below.

A summary of the agreed guidelines for procurement involving community are the following:

### **5.1 Community Participation for Works under the Sub-Projects.**

For renovation of offices and other small works (less than US\$ 50,000 equivalent), works may be conducted through contributions from communities, which may be in the form of labor and materials, but may also include land. For contribution of labor, communities may choose to include full or partial labor cost in the proposals and/or pay salaries for work done on the project. Whenever construction materials are procured from suppliers, these shall follow the procedures of procurement of goods outlined below. Construction using a labor-intensive arrangement with community members is subject to the following provisions:

- (a) The architectural plans and engineering designs for the above very small civil works shall be based on Government-approved plans and designs
- (b) The implementation/subproject agreement covering these works shall include the following: (i) specified lump-sum, fixed price amount based on a written estimate of work to be rendered by identified laborers from the community; (ii) description in reasonable detail, including basic specifications, required completion date, and relevant drawings where applicable.
- (c) The wage rate for community labor shall follow Government standards for the location and type of labor as established by the Ministry of Settlement and Regional Infrastructure (Kimpraswil).

In areas where the community does not have the capacity to construct works themselves, the community may (with GOI prior agreement as established in the subproject implementation agreement) procure small civil work contracts (for individual contracts less than US\$ 50,000 equivalent) following procurement of small works procedures. These contracts will be contracted under lump-sum, fixed price contracts awarded on the basis of quotations obtained from three qualified contractors in response to a written invitation. The invitation includes basic specifications, required start and completion dates, an agreement format acceptable to the Bank, and relevant drawings. The quotations will be opened in public meetings and read aloud. The award will be made to the contractor who offers the lowest price quotation for the works. No restrictions on participation in the bidding is allowed.

### **5.2 Community Participation for Goods under the Sub-Projects.**

Goods procured under the Community Grants includes purchase of construction materials for construction works under Community Participation, and other purchase of goods/equipment as agreed in the subproject implementation agreement.

Goods shall be procured using simplified Shopping procedures, i.e., written quotations obtained from at least three reputable local suppliers. The request for quotation includes a basic description and quantity of the goods, required date and place of delivery, and an agreement format acceptable to the Bank. The quotations will be opened in public meetings and read aloud. The award will be made to the supplier who offers the lowest price quotation. No restrictions on participation in the bidding is allowed. For subprojects located in remote areas where it is not economical to obtain prices from suppliers located far from project sites, less than three quotations is acceptable, as is direct contracting. The group proposing the subproject, however, needs to justify these methods, and verifications by project staff must be placed on record for Bank supervision.

Goods and materials for construction valued at less than Rp 15 million each (US\$ 1,760 equivalent) may be purchased from local suppliers/stores after conducting a price comparison ‘survey’ by visiting at least three local suppliers. Price comparison of less than three is acceptable whenever there is a lack of alternative

suppliers. The price survey shall be conducted by two members of the community who are trusted by the community as having the required independence and integrity.

Subprojects may also include the purchase of goods provided/installed by the community or other community groups (acting as “suppliers”). These shall have reasonable rates as compared to prices of similar goods obtained from other stores nearby. The District PMU shall provide acceptable technical specifications to the “suppliers” and allow adequate time for delivery and installation.

### **5.3 Community Participation for Selection of Consultants under the Sub-Projects**

Selection of consultants under Community Grants may involve hiring of individual experts/engineers or firms through service delivery contracts. If there are cases, these will involve very small contracts (up to US\$ 1,000 equivalent per contract), therefore competition has no added value. Individuals will be hired following the Selection of Individual Consultants, and Single Source Selection procedures for firms. All services contracts should be reviewed by the communities and performance evaluated. If performance is found unacceptable, communities will have the right to terminate the contracts.

### **5.4 Workshops Conducted by Communities**

Communities will hold several workshops for training purposes, and the expenditure and accountability will follow Government own SOE procedures based on actual receipts, acceptable to the Bank.

## **6. Workshops and Training (US\$ 11.7 million equivalent)**

It is expected that a number of workshops and training will be conducted by the NCU and all other implementing agencies. The expenditure will be based on SOE, and government procedures acceptable to the Bank will apply.

## **7. Consulting Services (US\$ 11.8 million equivalent), and Community Support Services (US\$6.6m)**

The consulting services packages under this Project include the following:

- (i) Technical Assistance for Research and Studies.
- (ii) Financial Management and Procurement, hired by the NCU to assist at the National level and each District PMU (less than US\$ 2.5 million per contract package).
- (iii) Technical and Capacity Building Consultants.
- (iv) Public Awareness Consultant.
- (v) External Technical Audit.
- (vi) Individual experts.

The following observation is noted:

- (i) The contracts for services for Strengthening of Village Financial Management Systems and Operational Support for Employment Agent are expected to be below US\$ 100,000. Therefore, the selection process will follow the Selection Based on Consultant’s Qualification (CQ).
- (ii) LIPI will hire individuals to do RRI and LIT Sampling: Twice a year for each district (note: In year 6, one LIT Sampling will be combined with RRI Survey). Since the assignment is small (less than 50,000 per contract package), and the TOR is expected to be very clearly defined, in which the cost is more of an important paramount, the selection process will follow IC.
- (iii) There will be Community Facilitators (CF) and Senior Extension and Training Officers (SETOs), who will be hired directly by each District PMU. The selection process of the individuals will be conducted on competitive basis and **Direct Contracting** and is designated as **Community Support Services**.

- (iv) A technical audit firm will be hired to verify the quality of the goods/equipment, and the quality of implementation by communities.

#### **8. Studies etc (US\$ 3.8 million equivalent)**

This Category will include hiring firms/universities/NGOs for carrying out the survey, research and monitoring of the surveillance and training. The single contracts are expected to be less than US\$ 140,000 equivalent. The selection process will follow CQ procedures. There will be a Socio Economic Survey for each District, which will most likely be conducted by acquiring SUSENAS (National Socio-Economic Survey) data from BPS (Agency for National Statistics).

In addition, the District PMUs will also conduct several study tours, in and out of country. The expenditure will be based on SOE following government procedures acceptable to the Bank.

#### **9. Public Awareness and Education (US\$ 6.9 million equivalent)**

This Category includes the public awareness, campaign, and education of the COREMAP on the media. This could be conducted through selected advertisements on the national/international printed media, or through electronic media (such: TV and Radio). Several workshops/training will also be conducted, including the production of awareness materials. For this purpose, the NCU will hire a public awareness firm (whose contract is estimated at US\$ 1.66 million) to assist and manage all activities under this Category. The selection of consultants will follow QCBS procedures. The production of awareness materials will be procured following shopping or NCB procedures, and this will be included in the Consultants' contracts.

In addition, the District PMUs will also conduct local events, such as: beach cleaning, essay and drawing comp, which will be based on SOE.

#### **10. Incremental Operating Expenses (US\$ 11.3m equivalent) and Incremental Staff (US\$3.0m equivalent).**

The Bank will cover 78 % of the Operating Expenses, which includes provisions for office operation supports, communications, and meetings with stakeholders. The expenditure will be based on the actual receipt following the government standard procedures acceptable to the Bank. The incremental cost for staff will be financed separately by GOI, and will follow the standard government procedures.

#### **11. Fellowships/Scholarships (US\$ 2.8 million equivalent); and Village Grants (US\$ 6.3 million equivalent)**

Fellowships/Scholarships are provided through various projects under the Project on competitive basis. Village Grants are provided for a range of local activities including operational support to private employment agencies, for their support for out-migration for fishers willing to leave the Project Areas. Grants are also available through the District AIG funds, and the Credit Seed Funds. GOI will ensure competitive and transparent process. Detailed procedures and guidelines for fellowships/scholarships will be made available at the time of the Sea Partnership Program's initiation in 2005.

**Table A COREMAP Phase II (WB/GEF)**  
**[Expenditure Category/Procurement Method]**

	<u>International Competitive Bidding</u>	<u>National Competitive Bidding</u>	<u>Shopping</u>	<u>Community Participation</u>	<u>Direct Contracting</u>	<u>Consulting Services</u>	<u>SOE/Gov. Procedure</u>	<u>Total</u>
Goods & Equipment								
surveillance equipment	1,501.6		542.4					2,044.0
	(1,501.6)		(298.4)					(1,800.0)
	{325.0}		{65.0}					{390.0}
Other goods/equipment/services	2,170.1	600.0	570.0				-	3,340.1
	(2,170.0)	(400.0)	(400.0)					(2,970.0)
	{336.0}	{63.0}	{61.0}					{460.0}
Consulting Services						11,390.0	-	11,390.0
						(10,200.0)		(10,200.0)
						{410.0}		{410.0}
Studies etc.						1,403.9	2,400.0	3,803.9
						(1,268.0)	(2,132.0)	(3,400.0)
						{15.0}	{25.0}	{40.0}
Community Suppt. Services				1,000.0	5,582.9			6,582.9
				(1,000.0)	(4,700.0)			(5,700.0)
					{2,850.0}			{2,850.0}
Workshops, Training etc.							9,458.1	9,458.1
							(8,200.0)	(8,200.0)
							{2,260.0}	{2,260.0}
Awareness and Education						6,531.0	388.6	6,919.6
						(6,350.1)	(349.9)	(6,700.0)
Incremental Operating Expenses							10,368.8	10,368.8
							(7,800.0)	(7,800.0)
							{1,090.0}	{1,090.0}

Incremental Staff								2,950.3	2,950.3
								(0.0)	(0.0)
Fellowships								2,755.6	2,755.6
								(2,500.0)	(2,500.0)
Village Grants								6,263.7	6,263.7
								(6,300.0)	(6,300.0)
Unallocated								330.0	330.0
								(330.0)	(330.0)
Front End Fee								329.0	329.0
								(329.0)	(329.0)

Total Base Cost (WB+GOI)/1	3,671.7 -	600.0 -	1,112.4	1,000.0	5,582.9	19,324.8 -	35,244.2	66,377.9
(Total WB Financing)/2	(3,671.6) -	(400.0) -	(698.4)	(1,000.0)	(4,700.0)	(17,818.1) -	(27,940.9)	(56,229.0)
<b>(Total GEF Financing)</b>	{661.0} -	{63.0} -	{126.0}	{0}	{2,850.0}	{425.0} -	{3,375.0} -	{7,500.0}
							Total Project Cost	74,251.1
							Total Financing	74,580.1

Note: Figures in ( ) parenthesis are the respective amounts financed by World Bank

Figures in { } brackets are the respective amounts financed by GEF

/1 Does not include contingencies or front-end fee; /2 includes front end fee;

Consultant Services Expenditure Category	Selection Method							Total Cost
	QCBS	QBS	SFB	LCS	CQ	Other	NBF	
A. FIRMS	12,558.5	0.0	0.0	5,763.6	330.2	0.0	0.0	18,652.3
	(11,875.9)	(0.0)	(0.0)	(5,061.5)	(288.9)	0.0	0.0	(17,226.3)
B. INDIVIDUAL	0.0	0.0	0.0	0.0	0.0	672.5	0.0	672.5
	0.0	0.0	0.0	0.0	0.0	(591.8)	(0.0)	(591.8)
<b>TOTAL</b>	<b>12,558.5</b>	<b>0.0</b>	<b>0.0</b>	<b>5,763.6</b>	<b>330.2</b>	<b>672.5</b>	<b>0.0</b>	<b>19,324.8</b>
	(11,875.9)	(0.0)	(0.0)	(5,061.5)	(288.9)	(591.8)	(0.0)	(17,818.1)

### Prior review thresholds (Table B)

It is expected that about 25 % of total expenditures would be subject to prior review. The Ministry of Finance has issued a decree to state that the exchange rate to be used for determining the threshold for prior review is at IDR 8,500/US\$. This understanding will be updated from time to time with Bank's prior agreement. The following prior review thresholds have been established:

Due to the "high" risk rating for this assessment, the following prior review thresholds and supervision plan are proposed:

- (i) Procurement of Goods: (i) To all contract packages whose contract value equal to or above the equivalent of US\$ 100,000; and (ii) to the first contract package of contract value less than the equivalent of US\$ 100,000 to each of the implementing agency.
- (ii) Selection of Consultant Services: To all contract packages whose contract value equal to or above the equivalent of US\$ 100,000 for the consultant firms, and to all contract packages whose contract value equal to or above the equivalent of US\$ 50,000 for the individual consultants. All TORs shall be review by the Bank regardless of values.
- (iii) Community Contracts: To the first contract package of each District PMU regardless of value.

Frequency of procurement supervisions proposed: Every six months (note: post-review/audits every 1 year).

The contracts which are subject to prior review shall be determined from Procurement Plans acceptable to the Bank that are updated by October each year for implementation for the following GOI fiscal year.

All contracts below the above thresholds are subject to random post review conducted annually by the Bank to cover at least 20 % of contracts implemented in that period (including 2 % which are carried out by the communities). The sampling should be selected such that priority be given to those implementing agencies (including subprojects) with more procurement problems and in need of more assistance. In addition, the NCU is required :

- (i) to post review the NCB contracts procured by District PMUs (and all their subsidiary units) that are not subject to the Bank's prior review; and
- (ii) to randomly review contracts implemented by communities which are NOT subject to the Bank's prior review.

The following issues should be addressed regularly during the Bank's supervision:

- (i) The capacity and capability of established project staff in implementing procurement
- (ii) The level of enforcement of the agreed procedures and documents.
- (iii) The effectiveness of provinces/districts in solving procurement problems, including complaint resolutions.
- (iv) An assessment of the effectiveness of the Borrower's monitoring and supervision implementation with respect to procurement.

**Table B: Thresholds for Procurement Methods and Prior Review**

Expenditure Category	Contract Value Thresholds (in US\$ ,000)	Procurement Methods	Contracts Subject to Prior Review Thresholds (in US\$ '000)
Goods	100	ICB/NCB/Shopping/Direct Contract	3,944.56
Consulting Services	100 (Firms); 50 (Individuals)	QCBS/LCS/CQ	11,801.89
Studies etc.	100 (Firms); 50 (Individuals)	QCBS	358.62
CBM Contracts	1st contracts from each DPMU	CP	-
Workshops, Training etc.	-	-	-
Awareness and Education	100 (Firms); 50 (Individuals)	QCBS	2,803.52
Operating Expenses	-	-	-
Incremental Staff	-	-	-
Fellowships	-	-	-
Grants	-	-	-
<b>TOTAL VALUE OF CONTRACTS SUBJECT TO PRIOR REVIEW</b>			<b>18,908.58</b>
The Post Review Intensity			20% of Contracts

**Overall Procurement Risk Assessment**

**HIGH**

**Frequency of procurement supervision missions proposed:** two every one year (includes special procurement supervision for post-review/audits)

## Clarification of NCB Procedures

### 1. General

The procedures to be followed for national competitive bidding shall be those set forth in Presidential Decree No. 80/2003 of the Republic of Indonesia with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the “Guidelines for Procurement under IBRD Loans and IDA Credits” (the Guidelines).

### 2. Registration

- (a) Bidding shall not be restricted to pre-registered firms and shall not be a condition for participation in the bidding process.
- (b) Where registration is required prior to award of contract, bidders (i) shall be allowed a reasonable time to complete the registration process, and (ii) shall not be denied registration for reasons unrelated to their capability and resources to successfully perform the contract, which shall be verified through post-qualification.

### 3. Pre-qualification

Pre-qualification shall not be used for simple goods and works. Normally, post-qualification shall be used. Pre-qualification shall be required only for large or complex works with the prior ‘no objection’ of the Association. When pre-qualification shall be required:

- (a) eligible bidders (both national and foreign) shall not be denied pre-qualification, and
- (b) invitations to pre-qualify for bidding shall be advertised in at least one widely circulated national daily newspaper a minimum of 30 days prior to the deadline for the submission of pre-qualification applications.

### 4. Joint Ventures

A Bidder declared the lowest evaluated responsive bidder shall not be required to form a joint venture or to sub-contract part of work or part of the supply of goods as a condition of award of the contract.

### 5. Preferences

- (a) No preference of any kind shall be given to national bidders.
- (b) Regulations issued by a sectoral ministry, provincial regulations and local regulations, which restrict national competitive bidding procedures to a class of contractors or a class of suppliers shall not be applicable to procurement procedures under the Loan/Credit Agreement.

### 6. Advertising

- (a) Invitations to bid shall be advertised in at least one widely circulated national daily newspaper allowing a minimum of 30 days for the preparation and submission of bids

and allowing potential bidders to purchase bidding documents up to 24 hours prior the deadline for the submission of bids.

- (b) Bid documents shall be made available, by mail or in person, to all who are willing to pay the required fee.
- (c) Bidders domiciled outside the area/district/province of the unit responsible for procurement shall be allowed to participate regardless of the estimated value of the contract.
- (d) Foreign bidders shall not be precluded from bidding. If a registration process is required, a foreign firm declared the lowest evaluated bidder shall be given a reasonable opportunity for registering.

6. Bid Security

Bid Security, at the bidder's option, shall be in the form of a letter of credit or bank guarantee from a reputable bank.

7. Bid Opening and Bid Evaluation

- (a) Bids shall be opened in public, immediately after the deadline for submission of bids, and if bids are invited in two envelopes, both envelopes (technical and price) shall be opened at the same time.
- (b) Evaluation of bids shall be made in strict adherence to the criteria declared in the bidding documents and contracts shall be awarded to the lowest evaluated bidder.
- (c) Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations.
- (d) No bidder shall be rejected merely on the basis of a comparison with the owner's estimate and budget ceiling without the Bank's prior concurrence.

8. Rejection of Bids

- (a) All bids shall not be rejected and new bids solicited without the Bank's prior concurrence.
- (b) When the number of responsive bids is less than three, rebidding shall not be carried out without the Bank's prior concurrence.

### Clarification of “Pemilihan Langsung” Procedures

The procedures set forth in the Keppres 18/2000 as “Pemilihan Langsung” may be considered as satisfying the Shopping procedures as defined in the “Guidelines for Procurement under IBRD Loans and IDA Credit” (the Guidelines), subject to the following clarification:

<u>Issue</u>	<u>Bank Guidelines (National Shopping)</u>	<u>Keppres 18/2000 “Pemilihan Langsung”</u>
1. Applicability	Simple and rapid procurement normally for off the shelf items	Does not specify the types of goods as long as the contract amount is less than IDR 50 million (USD 5,000 equivalent)
2. Advertisement	Not required	Not required
3. Principles	Comparing at least three quotations from reputable <u>suppliers</u>	Comparing prices from three <u>invited firms</u> . If any of the invited firms does not submit quotations, and it turns out that there are less than three suppliers interested, then re-invitation shall be sought. If after second trial, the procurement team fails to come up with at least three firms, than the use of Direct Contract is allowed.
4. Registration (erroniously called pre qualification)	Not required	Required as part of the shopping process prior to evaluation of quotations. It is required that all national firms have the certificate of pre qualification from the respective local government stating in which kind of business areas that the firms are eligible to do business
5. Firms to be invited	Reputable, well established, and are suppliers of the goods or services being purchased as part of their normal business	No specific requirements for the firms to be invited, as long as the certificate of pre qualification of the invited firms is in the supply of the goods or services being purchased. It is normal that firms are certified for various lines of business but in reality do not actually engage in such kind of business. Also there is a requirement to give priority to invite firms within the respective

		districts where the procurement process takes place before seeking firms from outside those districts.
6. Form of requests	By means of a simple Request of Quotation including the description and quantity of the goods, as well as the required delivery time and place for the goods or services, including any installation requirements, as appropriate. The request indicates the date by which the quotations are needed.	By means of a standard bidding documents which are normally used for national competitive bidding process
7. Bid and/or performance securities	Not required	Required
8. Prices and currencies	Prices for goods supplied from within the country (including previously imported items) are requested to be quoted EXW (ex works, ex factory, ex warehouse ex show room or off-the-shelf, as applicable), including all custom duties and sale and other taxes already paid or payable on the raw materials and components. For goods offered from abroad (i.e., not previously imported), prices are requested CIF or CIP. Prices can be quoted in any currency of the Bank-member countries.	No specific requirement on prices and currencies. As normal practice, since shopping is intended for small contracts (below USD 5,000 equivalent) then off the shelf prices in local currency are used.
9. Time for submission of quotations	There is no requirement for strict time and date for submission of quotations, but normally requests for quotes indicate the expected date of submission of quotes, within one or two weeks of the initial request. In other cases, if the purchaser has not received at least three quotations within the time set, it verifies with the missing suppliers whether they intend to do so and how soon. Unless there is extreme urgency or there are already three or more quotations available, the client may give a reasonable	Time for submission of quotations shall be specified in the “bidding documents”, and if a firm does not submit the quotations by the specified date, then its quotations shall be rejected. No verification process is allowed to late quotations.

	amount of additional time, say three more days, to get additional quotations. At this point the client may proceed with the comparison of the proposals received.	
10. Public opening of quotations	Not required	Required
11. Evaluation committee	Not required	Required, and no requirement to include a technically qualified person in the field of goods/services being purchased
12. Evaluation criteria	Lowest price with some flexibility as long as stated in the Request for Quotations	Lowest price
13. Negotiation	Not allowed	Required with the firm offering the lowest price

## Technical Annex 6 B

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### Financial Management & Disbursement Arrangements

##### *Summary of Financial Management Assessment*

1. A financial management assessment of this project was carried out between May to October 2003 and has involved an assessment of financial management capacity at the key implementing agencies and an evaluation of the adequacy of financial management arrangements proposed for the project, including accounting systems for project expenditures and underlying internal controls. This assessment covered project activities financed by all sources, including IBRD/IDA and Global Environment Fund (GEF).
2. A summary of the observations on financial management capacity is as follows:
  - (a) The recently established National Coordination Unit (NCU) housed within the DG-Coasts and Small Islands (DGCSI), Ministry of Marine Affairs and Fisheries (MMAF) will be primarily responsible for coordinating the Program, with implementation and program management occurring within each of 6 participating Districts. Scientific Coral Reef Research and Coral Reef Education activities will be coordinated by the Indonesian Institute for Sciences (LIPI), while program activities within national marine parks will be implemented through the park authorities under the jurisdiction of the Directorate of Protected Areas (PHKA), within Ministry of Forestry, and specifically, under the responsibility of the NCU Assistant Director for Marine Parks. Recent Bank experience in other projects in the concerned Ministries, the shortage of financial management skills in the Indonesian Civil Service generally and a consideration of the Country Financial Accountability Assessment report suggest that financial management capacity at these central agencies is likely to be generally low.
  - b) A significant part of the project expenditure will be managed and accounted for at the district government level and by the communities at village levels. In districts, there is an even greater shortage of accounting skills, and financial management systems are generally weaker than at the center. Villages are not expected to have financial management skills, although the program is anticipated to train them in order to create a more effective village financial management system.
3. An analysis of project specific risks indicates that substantial risks may arise from several features. Overall, the project will be influenced to some degree by the weak overall control environment in the country, as diagnosed by the Country Financial Accountability Assessment completed in April 2001. Since the completion of that report, progress on country financial management reforms have been slow. The executing agency (MMAF) has prior experience in managing multilateral Bank-financed projects, and LIPI, the EA for Phase I has experience too. Risks arise from geographical spread of PMOs and use of multiple agencies and community organizations. The geographical spread of project activities to over 416 villages and inherently weak and variable financial management capacity in the regions imposes substantial risks on financial accounting and reporting. Community Based and Collaborative Management comprises a significant 59% of program expenditure, activities for which financial management will present challenges. Validation of payments is traditionally a weak area and vulnerable to malfeasance and fraud.
4. Several measures have been designed to mitigate these risks. These include deployment of financial management consultants in villages and districts to train Borrower staff and assist in the

preparation of project financial statements and applying more intensive payment validation procedures, including community disclosure and oversight mechanisms where applicable. A Coastal Community Empowerment Board (CCB) comprising of a wide range of stakeholders and Chaired by the Bupati will ensure that program budgets are reviewed and reconciled in an open and transparent way. A series of these measures and other operating authorities and procedures for each project activity are expected to be clearly documented in a comprehensive Project Management Manual. Moreover, a Governance, or Anti-Corruption Strategy has been prepared for the program, including a Complaints Handling System (see Technical Annex 7).

5. Based on these factors, financial management risks inherent in the program entity and risks specific to program design have been rated as **substantial**. The financial management arrangements that have been proposed for this program include specific actions summarized below, that would mitigate these risks and are therefore considered adequate.

### ***Summary of Program Description***

6. The financial management and disbursement arrangements have been designed keeping in mind the risks noted above and the following program design features:

7. The Coral Reef Rehabilitation and Management Program (COREMAP) is a 15-year program designed as an Adaptable Program Loan (APL) and aimed at establishing “a viable framework for a national coral reef management system in Indonesia” based on community and collaborative management. Phase I aimed to establish over six years (1998-2004) a pilot national system for coral reef management to be followed by two phases of six years each intended to first expand the program to other sites and then to consolidate the program nationally on a sustainable basis.

The objective of the Phase II of the program (2004 – 2009) is to accelerate the program by establishing a financially sustainable program that is nationally coordinated but decentralized in implementation, in order to empower and to support coastal communities to sustainably co-manage the use of coral reefs and associated ecosystem resources, and revive damaged coral reefs, which will in turn, enhance the welfare of these communities in Indonesia. The second phase will expand the number of program sites, adjusting the process of implementation to reflect the lessons learned from Phase I, in particular, promoting collaborative management partnerships between communities and local governments. The World Bank and Global Environment Facility will finance up to 6 program sites in Phase II. Total Cost is expected to be approximately US\$74.3 million, of which US\$55.9 million will be from IBRD/IDA and US\$7.5 million from GEF. A summary of expenditure proposed under each category is stated elsewhere in this document, including Annex 6A.

### ***Project Organization Proposed***

8. The project organization proposed is summarized below:

9. At the national level, the program will be coordinated by a National Coordinating Unit (NCU), which will be housed in the Ministry of Marine Affairs and Fisheries, and comprise representatives of all implementing agencies, viz.,

- (a) Ministry of Marine Affairs and Fisheries Directorate (DKP);
- (b) Indonesian Institute of Sciences, (LIPI) which is wholly owned by the Government;
- (c) The Ministry of Forestry, Directorate of National Parks (PHKA);
- (d) Regional planning agencies ( BAPPEDA); and
- (e) The Armed Forces of Indonesia (TNI).

10. The NCU will provide the needed and adequate support for the District PMU's to implement COREMAP Phase II activities. Also at the national level, there will be a Coral Reef Information and Training center (CRITC), which will coordinate and support the activities implemented by the district CRITCs. The Marine Parks subcomponent of the program will be managed by Directorate General of Forest Protection and Nature Conservation.

11. At provincial level, relevant agencies (DKP, Bappeda), and Police, NGOs, Universities, and the private sector will backstop the district on demand, particularly in the provisions of technical expertise. They will also play a functional role in monitoring and evaluation of districts.

12. The Program will be implemented at the district level by a Program Management Unit/Office (PMU), accountable to a multi-stakeholder district board, which will be chaired by the *Bupati*. Within a *Marine National Park jurisdiction* a similar board will be established under the chair of the *Manager of the Marine National Park*. These two boards will function in a similar way, and support the implementation of community-based and collaborative management (CBM) programs. The multi-stakeholder Board will be established by means of an SK issued by the Bupati. Within a year or two of the Board being established, the functions of the multi-stakeholder Board should be formalized by means of a decree passed by the regional parliament (DPR-D *Perda*). This is not inconsistent with the amount of time taken to establish similar boards in North Sulawesi.

13. The District PMU will be staffed by at least three qualified government technical personnel, seconded full-time to the COREMAP Phase II Program. These staff will be from, and represent Dinas KP, KSDA / Taman Nasional, and BAPPEDA. Moreover, the PMUs will appoint a program manager and support staff. The PMU will be supported by several consultants, including: (i) Marine Conservation Area/Fisheries Management Specialist, and (ii) CBM Specialist. Also working under the PMU, there will be a team of senior, extension and training officers (SETOs), who will coordinate community facilitators (CFs) responsible for the implementation of CBM activities.

14. Sub-District and Village Level. SETOs will coordinate at sub-district level with the Camat, Dinas extension officers, religious and traditional organization, local NGOs and media. CFs will work with the head of village, BDP, various other community organizations, and village motivators, to be appointed by the villages. Community organizations will also be formed for management of the Community Development activities under Component B. Components A and C will be managed largely by the NCU with some parts initiated and managed in the districts. Individual consultants will be appointed for assisting participating government agencies, including NCU, in financial accounting.

### ***Strengths and Weaknesses***

15. The program design has the following strengths and weaknesses from the financial management perspective. These have been taken into account in assessing risks, as summarized in Table 2 below, and in designing the financial management arrangements discussed below.

- (a) A significant 67% of the total project amount will be spent on "soft" areas, such as Technical Assistance Consultancies, Training, Workshops, Community based support services, Awareness campaigns and Fellowships. This will be carried out at both central and district levels. Such expenditure is often vulnerable to fraud and internal control lapses, as it is sometimes difficult to measure and verify outputs realized, and to establish or verify satisfactory completion of work. The Monitoring, Evaluation and Feedback (ME&F) framework for this program must therefore be very carefully designed and implemented to provide regular feedback on what such significant expenditures are realizing by way of outputs and outcomes, and clear sanctions when serious lapses are found.

- (b) The Phase II Program is a follow-on project from COREMAP Phase I that closes on June 30, 2004. Phase 1 was for an authorized amount of only \$6.9 million, whereas the proposed Phase 2 has been scaled up dramatically, to a total donor funding of \$74 million. Thus, while the concerned Institute that implemented the earlier project has had recent experience in executing Bank financed projects, the scale and size of the current one would require substantially scaled up resources and capacities within Ministry of Marine Affairs where the NCU is located. This is sought to be addressed by financial management and procurement consultants who will assist implementation at both the center and the districts.
- (c) The decentralized activities will be carried out at pre-selected 6 districts. Of the proposed 6 Districts, 3 districts were also involved in implementing COREMAP Phase I, and therefore have some prior experience in project implementation would be useful. The total amount per district is however dramatically increasing under this project, ranging from an average project expenditure of \$ 5 million in Sikka to \$9 million in Buton. These are substantial funds to be absorbed at district level.
- (d) Community based and collaborative management activities will be a significant 59% of the total outlay, which will include grants and funding for community economic activities. The financial accountability arrangements will require simplicity and yet adherence to minimal documentation to ensure fiduciary standards are met. The use of financial management consultants is planned to help address this, and to train Borrower staff to build their capacity. The use of the CCB and NGOs or other community organizations will also be utilized to provide community, and multi-stakeholder oversight, a useful anti-corruption measure.
- (e) Activities under component B of this project will be carried out substantially in the 6 districts and within 416 villages. Activities have elements that will be designed and implemented by the communities themselves. These include activities such as community based resource management, establishing village sanctuaries, as well as livelihood and income generating pilots for coastal poor communities and support for poor women and migratory fishers. These components are expected to aggregate about 35% of the total amount of \$40 million earmarked for component B. All these activities will present challenges for financial management. Fund flows will have to be tailored to service remote areas and island communities that are not fully served by central or district government treasury offices, using “Force Account” models developed in other CDD projects in the country. Even basic book keeping skills are unlikely to be available at these villages, increasing risks to financial accountability. To mitigate these risks, the project provides for intensive training in simplified book methods and will train selected community members as village financial management specialists. The project design has innovative features for community oversight that are being documented in a project manual.
- (f) One such innovative feature is the constitution of a Coastal Community Empowerment Board in each participating District that will include members of various stakeholders, such as project management staff, NGOs and local community members. This Board will be legally constituted by the region’s head and will provide oversight of the functioning of the district project management offices. Further support will be provided by the media by involving the Association of Journalists.
- (g) The project proposes to engage a large number of individual facilitators, consultants, motivators and extension/training officers. It is anticipated that each participating village will have one or more of such individuals at work for the duration of the project period. Payment of salaries, honorarium and allowances to these individuals will be outside the civil service salary administration system. Payment of such monies through project implementing units in the district could provide opportunities for extortion by unscrupulous project managers, which has been suspected in some other projects. To overcome this risk, the project proposes to utilize commercial banking services to channel payments

to these beneficiaries at a modest service charge. The effective functioning of this system will be centrally monitored.

**Internal controls and risk analysis**

16. A detailed analysis of risks arising from the country situation, the proposed project entities and specific project features and related internal controls has been completed during the assessment, and is summarized below. These risks have been rated on a scale from *High, Substantial, Moderate and Low.*

**Table 2**

<i>Risks</i>	<i>Assessment</i>	<b>Summary Comments and Risk Mitigation Measures.</b>
<b>A. Inherent Country Risks</b>		
Budgetary procedures	Substantial	CFAA diagnostic completed in 2001 rated country control environment as weak. White Paper has been prepared by Government in May 2002 to address reform issues. New State Finance law has been passed, but the laws on Treasury and Audit are yet to be legislated. Slow progress in implementation of CFAA recommendations.
Public Sector Accounting	Substantial	National accounting continues on a single entry and cash basis with a partially computerized system. Public expenditure accounting standards not yet issued, though an Accounting Standards Board has been constituted and a long term strategy to move towards accrual accounting is being prepared.
Auditing Arrangements	Moderate	BPK now has legal mandate for external audit of regional governments, though coverage is currently very limited due to resource constraints. Institutional Development Plan for BPK under implementation. BPK Audit reports are not publicly disclosed.
<i>OVERALL INHERENT COUNTRY RISK</i>	<b>Substantial</b>	
<b>B. Project Entity specific risks</b>		
1. Implementing Entity Organization	Substantial	Lead implementing agency has prior experience in managing Bank projects. But risks arise from geographical spread of PMOs and use of multiple agencies and community organizations. Risk mitigation possible through clear documentation of operating authorities and procedures for each project activity in the Project Manual.
2. Accounting capacity, staffing.	Substantial	Generally poor accounting capacity in the provincial and regional offices. Mitigation through use of project financial management consultants.
3. Funds Flow	Moderate	Project likely to be classified as “decentralized” under KMK 35. Risks may arise from inherent weaknesses and chronic delays in budget approval systems of GOI. Capacities of regional government budgeting systems not yet tested.
4. Audit arrangements	Moderate	Risks arise from capacity constraints in internal and external audit agencies of GOI.
5. Information systems. Reporting and monitoring.	Substantial	Risks arise from manual accounting systems in government agencies, and lack of monitoring of physical parameters of development activity.

Overall Entity specific Risk	<b>Substantial</b>	
<b>C. PROJECT SPECIFIC RISKS</b>		
1. ORGANIZATION STRUCTURE	<i>Substantial</i>	Operating role and authorities of different agencies and entities involved in project activities need to be clarified in Project Management Manual so that overlaps are removed and accountabilities are clear.
2. COMPLETION OF PROJECT WORKS & SERVICES	<i>Substantial</i>	Some sub-project activities are not yet fully defined, especially on what is eligible, which increases risks. Substantial expenditure expected in “soft” areas such as TA, and workshops, which are traditionally vulnerable. Mitigation through appropriate internal controls prescribed in Project Management Manual.
3. RECEIPT OF PROJECT GOODS & EQUIPMENT	<i>Substantial</i>	Procurement of goods likely in districts, mostly computers and communication equipment.
4. PAYMENT VALIDATION	<i>Substantial</i>	Traditionally a weak area in Bank financed projects, further corroborated by audit reports of previous Coremap 1 project. To mitigate risks, additional documentation and internal control requirements will be prescribed in Project Management Manual to enhance documentary trails. These are summarized below.

5. DISBURSEMENT AND FUND FLOWS	<i>Substantial</i>	Risks arise from use of remoteness of some project locations and geographically dispersed offices of KPKN for disbursements, which could lead to vulnerability in overall reconciliation of Special Accounts. Responsibility for Special Account management to be decentralized to CMU at MMAF. Transaction SOE disbursements proposed initially, FMR based disbursement to be considered later. Delays in release of funds to community groups experienced in earlier project. Inherent risks are also inherent in use of “force accounts”.
6. PROJECT MONITORING AND REPORTING	<i>Substantial</i>	Geographical spread of spending units and chronic delays in approval of DIP warrants could increase risks for project implementation. FMR reporting will be introduced from inception, even if not immediately used for disbursements.
7. ACCOUNTING	<i>Substantial</i>	Geographical spread of accounting locations and poor capacity increase risks. Use of trained FM consultants proposed.
8. EXTERNAL AUDITS	<i>Moderate</i>	Jurisdiction of BPKP for project audit in regions can become contentious. To be clarified.
Overall Project Specific Risks	<b>Substantial</b>	

***Program Financial Management Arrangements***

17. **Organization.** For purposes of financial management the following project organization is proposed:

A. Payments processing. A total of 15 Project Management Offices (PMO) offices are likely to be involved in project financial management, including financial accounting and maintenance of financial controls, and will be identified in the Project Implementation Plan. Teams of project managers (Pimpros) and project treasurers will be formally appointed at each PIU, both at the center in Jakarta (MMAF/DPK, PHKA, LIPI) and in the participating regions. Payment requests (SPP) will be prepared and validated by project treasurers at each PMO.

Payment validation procedures are identified as a key risk. To mitigate this, detailed procedures for validation of payments are being developed for each kind of project activity.. Financial controls requirements for each of these activities are different and payment validation procedures will be based on the following principles and best practices, designed to strengthen controls and reduce risks of fraud and corruption. These measures take into account experience gained in project supervision in other projects as well as feedback from recent audit reports:

- All decentralized project activities will be reviewed quarterly by community based organizations, certified by them and publicly disclosed in the villages concerned, in places such as local mosques or village notice boards.
- A list of all project officials who are authorized to commit funds and approve payments and their financial limits will be similarly publicly disclosed.
- For technical assistance, workshop and training activities the agency or agencies receiving training will be required to certify satisfactory completion before training expenses are reimbursed to the provider. Direct and original evidence of training imparted and related expenses such as travel incurred will be required before payments to contractors are authorized.
- For community drive development expenditure, individual proposals approved will be publicized in local mosques or village notice boards. Community groups eligible to receive project funds will be legally constituted and trained to keep simple accounting records for all receipts and expenditures, including supporting documentation. These will be subject to annual audit. Detailed formats for this will be prescribed in the Project Manual.
- Withdrawals of funds from each village force account will require at least 2 signatories from community members. All transactions in Bank statements must be reflected in accounting records.
- All decentralized and village accounting records will be kept at a common location and be accessible under supervision to community leaders, auditors and visiting Bank staff.

A summary of these proposed measures is given below, with specific minimal documents required before payments can be authorized, other than authorized and valid contracts. These documents should be retained at PMU and attached to payment voucher (SPP) for audit purposes, and copies submitted to KPKN for issue of payment instructions (SPM). Full details of these will be included in the Project Management Manual.

<b>Kind of Expenditure</b>	<b>Payment validation procedure</b>
<p>Purchase of goods and equipment:</p> <ul style="list-style-type: none"> <li>– Office equipment, computers, snorkel equipment, and dive master equipment procured at Districts.</li> <li>- Boats, watcher boats, Surveillance (MCS) equipment, cyanide detection minilab.</li> <li>- Park management equipment, which includes: radio, ultra-light aircraft, boats, and observation posts</li> </ul>	<p>Original supplier invoices on letterheads with full addresses and tax numbers.</p> <p>Tax invoices.</p> <p>Copies of warranty cards</p> <p>Technical specifications sheet.</p> <p>Evidence of delivery (packing list or transportation documents or ‘surat jalan’) and acceptance.</p> <p>For imported goods, certificate of origin.</p>
<p>Books/journals/other publication materials for LIPI and CRTIC offices.</p>	<p>.</p> <p>Original supplier invoices on letterheads with addresses and tax numbers.</p> <p>Tax invoices.</p>
<p>Village workshops</p>	<p>List of participants with names, signatures and addresses</p> <p>Agenda and output reports, where applicable.</p>
<p>Expenses on establishment of Information Centers for Coral Reef Management in each Community.</p> <p>Expenses on establishment of Training and Information Exchange Networks (including Infrastructure) between Communities: including FM Broadcasting radio</p>	<p>Original invoices for purchase of goods or services on letterheads.</p> <p>Radio stations invoices, tax receipts.</p>
<p>Credit and Savings Systems</p>	<p>Legal incorporation document</p> <p>Full name, addresses and ID numbers of initial depositors</p>
<p>Development of infrastructure and other small works – CD</p>	<p>Contractual agreement between the District PMU and the Community</p>

	<p>Copies of Architectural plans and engineering designs</p> <p>implementation/subproject agreement covering these works shall include the following: (i) specified lump-sum, fixed price amount based on a written estimate of work to be rendered by identified laborers from the community; (ii) description in reasonable detail, including basic specifications, required completion date, and relevant drawings where applicable.</p> <p>For construction materials, original tax invoices or invoices on vendor's letterhead.</p>
Individual consultants	<p>Formal contract with consultant, clearly stating consultant's name, address and Bank account No.</p> <p>Copy of ID card (KTP)</p>
Workshops and training	<p>Original hotel tax invoices where events are held</p> <p>List of participants with signatures</p> <p>Agenda and output reports where applicable.</p>
Travel costs for study tours	<p>Original travel tickets stubs, approved itinerary, with boarding passes if travel by air.</p>
Public awareness, campaign, and education of the COREMAP on the media	<p>Copies of advertisements in printed media.</p> <p>Copies of posters, brochures</p> <p>Original invoices from media and production company, on letterheads with full addresses.</p>
Fellowships/Scholarships	<p>List of beneficiaries, Bank account details, copies of ID cards, specimen signatures</p>

**B. Accounting.** The geographical spread of project implementation at District offices will likely impose a strain on project financial accounting and hence could disrupt preparation of acceptable consolidated financial statements. several implementing agencies will be involved for parts of the project. At the center, at least 3 Ministries will initiate and account for their respective components (MoHA, Bappenas, Ministry of Forestry & MMAF). In addition, distinct implementing roles have been assigned to LIPI each of the 6 district governments. It is proposed to hire individual financial management consultants at the central and district project offices, who will be tasked with ensuring that project financial accounting reports and FMRs are prepared accurately and at regular quarterly intervals at each district and a consolidated one at central level.

18. **Accounting policies and procedures.** Project management Offices will be required to maintain financial accounting for all project resources and expenditure on a cash basis in line with existing

Government accounting standards. Each PMO will budget for project funds and activities, and will therefore prepare financial accounting reports for submission to the National Coordination Unit, where consolidated reports will be prepared, including quarterly Financial Monitoring Reports and a single set of annual financial statements which will be audited.

19. Annual audited consolidated financial statements will be provided to the Bank within 6 months after the end of each fiscal year. The budget realization reports currently prepared by Ministries and Government agencies for internal financial reporting to the Government do not include reporting for project expenditure per activities or components, and hence would not be suitable for the reporting needs for this project from the point of view of effective project management. The formats for project financial statements prescribed by the Bank will include accounting for categories as specified in the Loan Agreement as well as components as stated in the PAD. Procedures will be agreed with project management to reconcile project financial accounts with budget realization reports to local and central governments on a quarterly basis.

20. Financial Monitoring Reports (FMRs) will be required from the Project on a quarterly basis, to be submitted to the Bank within 45 days of the quarter-end, initially for reporting purposes only, and subsequently to support Withdrawal Applications also. These reports will comprise information on procurement activity, implementation progress, sources and uses of funds and a forecast of funds required for the project. Detailed formats for these will be agreed before negotiations. A single set of FMRs, which include Special Account Activity Statements, will be prepared for the project reflecting each funding source, viz., GEF and IBRD/IDA.

Funds for project expenditure that are advanced to community groups for CBCM will be accounted for as expenditure when these are disbursed, and not when these are actually expended by communities and recorded in village book keeping records. Village book keeping records will however be audited on a sample basis by project auditors.

21. **Audit Arrangements.** The national internal audit agency (BPKP) will be accepted as auditors for this project. Terms of Reference for these audits will be agreed before negotiations, leading up to a single audit opinion on the project financial statements, Statements of Expenditure (SOE) and Special Accounts for both IBRD/IDA and GEF. It is intended that audit reports will be submitted by Project Management to the Bank no later than 6 months after the end of the project fiscal year. Central directives would therefore be required to ensure that BPKP is provided unrestricted access to all project activities for purposes of audit. PIUs will be encouraged to publicly disclose audit reports. The TOR for audit will include the following as additional scope, in recognition of the specific project risks:

- Comment on the adequacy of and satisfactory operation of internal controls over community based management activities, including book keeping. (Component B)
- Verification of outputs realized from expenditure under Component C.
- Comment on implementation of intensified payment validation procedures specified in the Project Manual.

Audit Report	Due date #
Project financial statements (consolidated), with appropriate disclosures on Statement of Expenditure , Special Account (IBRD/IDA) and Special Account (GEF)	30 <sup>th</sup> June of following year.
# After the project becomes effective, if in the first fiscal year of operation the project is in operation for less than 12 months, . for that <u>first fiscal year</u> the audit report will cover a period that is less than one year, i.e., the actual period of operation. Thereafter the audit will cover the full fiscal year each year The project is expected to close on December 31, 2009.	

### ***Fund flows and Disbursements***

22. Fund flows for project expenditure will follow traditional Government budgeting and payment mechanisms (DIP for expenditure at central Ministries and DIPP-LN for decentralized project locations in districts). These will have to be included in corresponding budgets every year by each respective PMU. The clear segregation of the activities and corresponding budgeting locations and accountability arrangements will be elaborated in the Project Implementation plan and Project Manual.

23. Existing government budgeting and payment mechanisms will be used for both these disbursement streams. Central Government’s treasury mechanisms and corresponding administrative and operational procedures will apply for central components and activities. Payments from KPKN offices will be based on duly approved payment requests (SPP) and contracts, and payment vouchers (SPMs) will be sent to project (PMU) offices for accounting purposes. For payments under the decentralized components, the appraisal and validation of payments will be done by PMOs at district offices, and the payment instruction (SPMU) issued with full supporting documents to KPKN for disbursement of funds.

24. Fund flows to community organizations will be channeled to the bank accounts (“force account procedures”) of eligible community groups who satisfy at least the following conditions:

- (a) The community groups are registered for the purposes of the project and meet the eligibility criteria specified in the Project Management Manual. The acceptance and eligibility of these groups should be recorded and approved by the Village Head in addition to the Project Manager.
- (b) Proposed activities of the groups are eligible under the project, approved by the project manager and publicized.
- (c) Internal operating authorities of the community groups are available in writing, in particular operation of bank accounts in a designated local Bank jointly by at least 2 elected members.

25. Special Account management and replenishments. A special Account will be opened in Bank Indonesia with an authorized allocation of initial deposit about US\$ 2 million and increased gradually to US\$ 5 million. The actual size of the initial deposit within this allocation will be determined prior to negotiations in consultation with the Borrower. The expenditures eligible for GEF financing have been identified in the Project Appraisal Document and will be notified in the Budget Allotment Documents (DIPP). Withdrawal from the Special Account will be based on payment orders by the KPKN offices once these have been approved by project managers. Replenishments into the Special Account will be based on Withdrawal Applications supported by Statements of Expenditures (SOE). For payments in excess of prior review thresholds, “summary sheet” procedures will be used. Financial Monitoring

Reports (FMRs) based disbursements will be introduced later in the project, after satisfactory introduction of FMR reporting in line with bank guidelines. Withdrawal Applications for replenishment of the Special Account will be prepared by the CMU at MMAF, and submitted to the Ministry of Finance (Director General Budgets) for approval and submission to the Bank.

**Conclusion & Action Plan**

26. The financial management arrangements as outlined herein are considered acceptable for the purposes of the project, subject to the satisfactory completion of the next steps and action plan summarized below:

**Table 3**

<b>Issue</b>	<b>Action required</b>	<b>Responsibility</b>	<b>Due Date</b>
1. Organizational arrangements	Project financial management consultants to be selected based on TORs approved by the Bank.	Project Director/MMAF	Before loan effectiveness
	Qualified staff to be appointed for project financial accounting at CMU and at each PMO.	Project Director/MMAF	Before negotiations
	Detailed job descriptions of the financial management consultants, facilitators and Senior Extension and Training Officers (SETO) to be prepared and included in Project Management Manual	Project Director/MMAF	Before negotiations
2. Accounting	Formats for Financial Monitoring Reports (FMRs) to be agreed with Bank.	CMU, Project Director	Before negotiations
3. Audit	MOHA Directive to participating regions to provide full access to BPKP for project audits.	CMU	Before loan effectiveness
	TOR for audit of project financial statements to be agreed with Borrower	CPMU, Project Director	Before negotiations
	Mechanisms for public disclosure of all audit reports to be agreed with Bank.	CMU Project Director	Before negotiations
4. Project Implementation	Draft Project Management Manual, including Financial Management and Grant Operations manual, to be agreed with Bank.	CMU, Project Director	Before negotiations
	Governance and operating rules for the District Boards, acceptable to the Bank, to be specified in the Project Management Manual.	CMU, Project Director	Before negotiations

	Formats for contracts between community groups and Dinas agencies laying down the duties and obligations of each in managing project implementation to be agreed with bank and included in the Project Management Manual.	CMU, Project Director	Before negotiations
	Format and procedures for book keeping at village level for community activities under the project to be finalized. and included in the Project Management Manual	CMU, Project Director	Before negotiations
	Agreements with selected Banks to administer the honoraria of consultants and SETOs.	CMU, Project Director	Before effectiveness
	Procedures for intensified payment validation procedures for project expenditure (See illustrative list above) to be included in the Project Management Manual.	CMU, Project Director	Before negotiations
	Operating rule and procedures for operation of credit micro finance funds in districts and villages to be prepared and included in the Project Management Manual..	CMU, Project Director	Before negotiations

27. A Project Management Manual (PMM) giving in detail approved procedures for various implementing agencies in managing the project, and a Grant Operational Manual (OM) with corresponding procedures and requirements for carrying out the project at the community level with Grant funds will be developed and agreed with the Bank at Appraisal. The following documents will be used and attached to the PMM and OM, and agreed with the Bank prior to negotiation:

- Terms of Reference for audit of the financial statements for the project, and the Special Account and Statement of Expenditure..
- Formats for Financial Monitoring Report to be brought into use by the project management upon commencement of implementation.
- Fund flow mechanisms in schematic diagrams describing the flow of loan and grant funds to each group of beneficiaries, including contractors for centrally procured items, contractors for decentralized procurement and community organizations.
- A document laying down agreed governance and operating rules for the District Boards.
- Detailed job descriptions of the financial management consultants, facilitators and Senior Extension and Training Officers (SETO).
- Formats for contracts between community groups and Dinas agencies laying down the duties and obligations of each in managing project implementation.
- Measures necessary to make the project audit reports and audited financial statements available to the public.
- Formats and procedures for book keeping at village level for community activities under the project.
- Procedures and relevant formats for preparation of Withdrawal Applications from the Special Account, as agreed with Ministry of Finance.

- Agreements with selected Banks to administer the honoraria of consultants and SETOs.
- Procedures for intensified payment validation procedures for project expenditure. (See illustrative list above)
- Operating rule and procedures for operation of credit micro finance funds in districts and villages.

### ***Supervision Arrangements***

28. Given the geographic spread and complexity of the project, and its overall risk classification, financial management supervision will be undertaken through supervision visits by Bank FM staff undertaken annually. Since Audit TORs provide for strengthened SOE reviews, these will not be conducted by Bank staff. Such supervision work will include review of internal controls surrounding project activities and expenses in the regions. Quarterly FMR reports will be reviewed regularly through the year where financial, procurement and contract management issues will be reviewed. Risk ratings at appraisal will be refreshed annually following supervision. The need for SOE reviews in future years will be reviewed subsequently based on feedback received from earlier reviews and audit reports.

### **29. Allocation of Loan (IBRD/IDA) Proceeds (Table 3)**

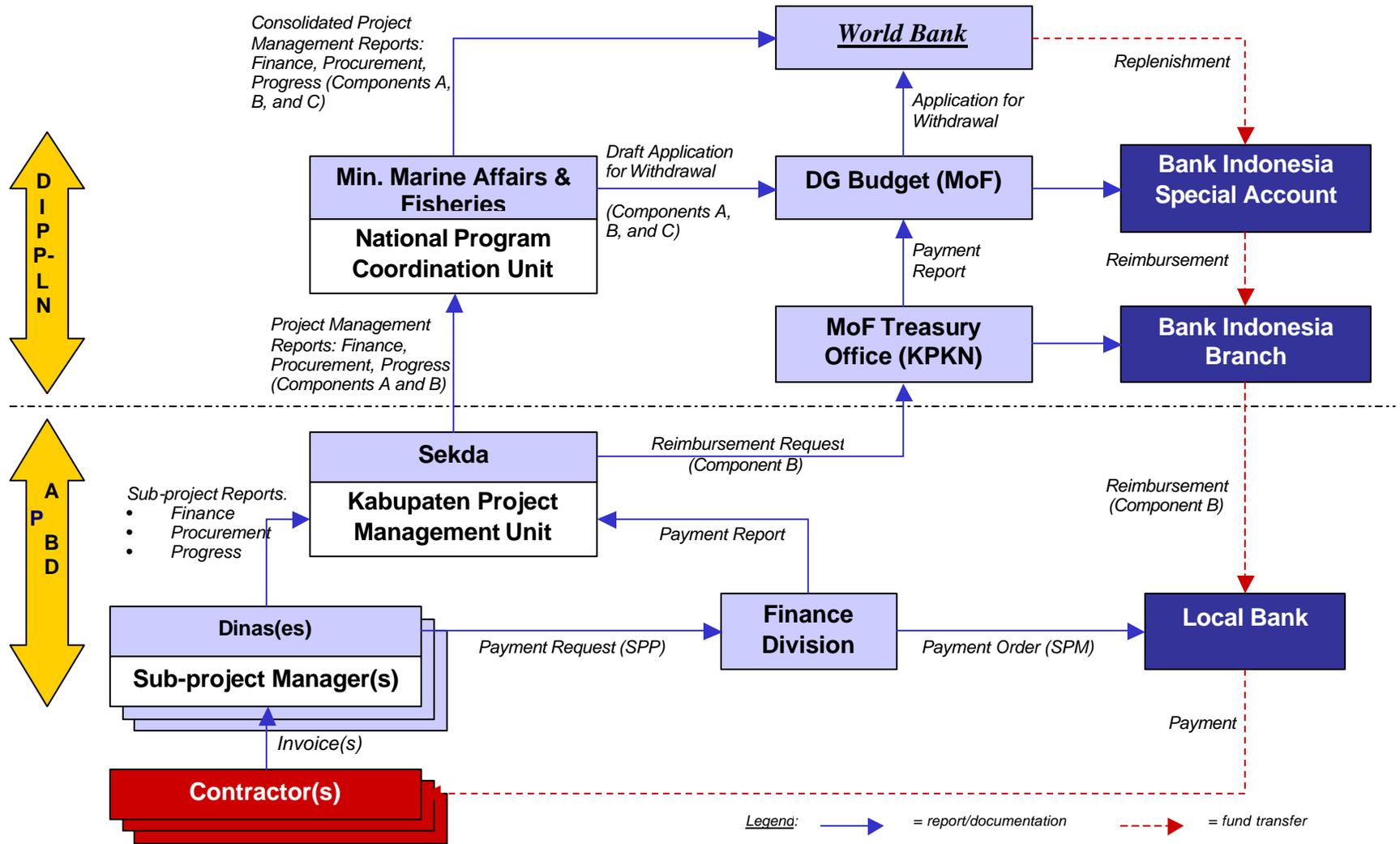
<b><u>Expenditure Category</u></b>	<b><u>Amount of the Credit Allocated (Expressed in SDR Equivalent)</u></b>	<b><u>Amount of the Loan Allocated (Expressed in dollars)</u></b>	<b><u>% of Expenditures to be Financed</u></b>
(1) Goods:			
(a) Surveillance equipment:			
(i) Part B.2 (g) and B.5 (c) of the Project	1,600,000	0	75% of foreign expenditures, 75% of local expenditures (ex-factory cost), and 55% of local expenditures for other items procured locally
(ii) Other Parts of the Project	500,000	0	100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 80% of local expenditures for other items procured locally
(b) Other goods:			
(i) Part B.1 (e) and (f), B.4 (b) and B.5 (a) and (c) of the Project	2,000,000	0	75% of foreign expenditures, 75% of local expenditures (ex-factory cost), and 55% of local expenditures for other items procured locally
(ii) Other Parts of the Project	1,000,000	0	100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 80% of local expenditures for other items procured locally
(2) Grants:	3,150,000	3,450,000	
(a) District Grants			100% of Grant amount disbursed
(b) Village Grants			100% of Grant amount disbursed
(3) Community Support	2,850,000	2,850,000	67%

Services under Part B.1 (d) of the Project			
(4) Training and workshops:			
(a) Part B.1 (a), (b) and (c) of the Project	1,000,000	3,000,000	45%
(b) Other Parts of the Project	640,000	3,560,000	100%
(5) Fellowships and scholarships under Part C.3 (d) and (f) of the Project	250,000	2,250,000	100%
(6) Awareness and Educational Services	3,350,000	3,350,000	100%
(7) Studies and Surveys other than Part B.2 (e) of the Project	0	3,400,000	100%
(8) Incremental operating costs:			
(a) Part B.5 (a) and (c) of the Project	1,000,000	3,240,000	80% in FY2004 and FY 2005, 60% in FY 2006 and FY 2007, and 40% thereafter
(b) Other Parts of the Project	560,000	3,000,000	100% in FY 2004 and FY 2005, 80% in FY 2006 and FY 2007, and 60% thereafter
(9) Consultants' services:			
(a) Part B.4 (b) of the Project	3,100,000	2,441,000	88%
(b) Other Parts of the Project	2,000,000	2,000,000	100%
(10) Front-end Fee	0	329,000	Amount due under Section 2.04 of the Loan Agreement
(11) Unallocated		330,000	
<b>TOTAL</b>	<b>23,000,000</b>	<b>33,200,000</b>	

#### Allocation of GEF Proceeds (Table 4)

<b>Expenditure Category</b>	<b>Amount of the GEF Trust Fund Grant (Expressed in SDR Equivalent)</b>	<b>% of Expenditures To Be Financed</b>
(1) Goods: (a) Surveillance (b) Other Goods	850,000	25%
(2) Training and Workshops	2,260,000	25%
(3) Studies	40,000	100%
(4) Incremental Operating Services	1,090,000	80% in FY2004 and FY 2005, 60% in FY 2006 and FY 2007, and 40% thereafter
(5) Community Support Services	2,850,000	33%
(6) Consultant services	410,000	12%
(7) Unallocated	0	
<b>Total</b>	<b>7,500,000</b>	

### Diagram of Funds Flow



## Technical Annex 7: Anti-Corruption Plan<sup>17</sup>

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### Summary

The COREMAP Phase II Program is nationally coordinated but decentralized in its implementation. It is comprehensive in scope, involving many connected activities, diverse stakeholders and covers 6 districts in 4 provinces, up to 416 villages, 2 National Marine Parks, and 4 local protected areas (KSDAS). As such, the Program is considered high risk in terms of corruption and fraud and many transactions are vulnerable to irregularities. The geographical spread of project activities and inherently weak and variable financial management capacity in the districts imposes substantial risks on financial management and accounting, and hence increases the fiduciary risk. The main risks are related to financial management issues, such as: inadequate payment validation procedures, and procurement issues, such as: collusion and improper billing practices. Additionally, significant amounts of the total program costs are spent on technical assistance consultancies, training, workshops awareness campaigns and fellowships. World Bank experiences have shown that such expenditures are often vulnerable to fraud and internal control lapses, as it is difficult to measure outputs.

A well-designed and implemented anti-corruption plan addressing the incentives of corruption and fraud is therefore essential to reach the development objective of the program. Hence, the objective of this Anti-Corruption Plan<sup>18</sup> is to: (i) identify corruption risks, and (ii) suggest mitigation measures beyond the standard control systems employed by the Bank. This plan will be reviewed at least every 6 months at the national, district and village level, and modified based on lessons learned.

Recognizing the challenges of implementing a decentralized Program, the National Coordination Unit (NCU) at the Ministry of Marine Affairs and Fisheries, the Program Management Units (PMUs) in the district Governments and other implementing agencies plan to address corruption risks by enhancing the project design, and by strengthening internal controls and mechanisms for transparency and accountability in the procurement process. The following seven key action areas have been identified by the Government of Indonesia to mitigate corruption risks in the Program:

- (i) Participation and Empowerment,
- (ii) Enhanced Disclosure Provisions and Transparency,
- (iii) Civil Society Oversight,
- (iv) Strengthened Procurement Policies and Procedures,
- (v) Payment Validation and Accountability Measures,
- (vi) Complaints Handling System, and
- (vii) Clear Sanctions and Remedies.

This annex also analyses the incentives and risks of corruption and fraud inherent in the Program structure in more detail through corruption mapping. Finally, appropriate mitigation measures are suggested for each of the risks identified.

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<sup>17</sup> This anti-corruption strategy draws upon a wide range of resources and experiences within Indonesia, most notably: the Coral Reef Rehabilitation and Management Program (COREMAP) Phase I Evaluation Report; Coral Reef Monitoring, Control and Surveillance: the COREMAP Experience; the Third Kecamatan Development Program (KDP); the Water Resources & Irrigation Sector Management Program; the Health Workforce and Services Program; and the Land Management and Policy Development Program. In addition, the strategy draws upon the Anti-Corruption Guide: Developing and Anti-Corruption Program for Reducing Fiduciary Risks for New Programs; Lessons from Indonesia; Fighting Corruption in KDP; Fiduciary Management for Community-Driven Development Programs. A Reference Guide; Corruption in Indonesia, A Development Perspective.

<sup>18</sup> This plan should be considered as a supplement to the specific control systems already outlined in Technical Annex 6(A): Procurement Arrangements, and Technical Annex 6(B): Financial Management & Disbursement Arrangements of the Project Appraisal Document.

## Corruption Mapping

As outlined in the Procurement Capacity Assessment Report, the overall risk of collusion, leakage and fraud in the procurement process has been assessed as “high”. This is due to the following reasons: (i) inadequate financial expertise at the District level, (ii) uncertainty because of the move to decentralization, (iii) the innovative nature of this program, (iv) lack of effective enforcement, (v) the unfamiliarity of implementing agencies with the new National Procurement Guidelines (Keppres), and new World Bank’s Procurement Guidelines, and (vi) the general procurement environment in Indonesia is weak. As a result of these circumstances in the procurement environment, the following risks for corruption are triggered:

- Risk for improper billing practices. Services can be over billed or not provided according agreed plans and financial statements. Risk for improper utilization of salaries and travel allowances, and risk of price fixing between technical assistance consultants and local government (including village heads).
- A high dependency on local government staff in the bidding process, especially at the district level, which can lead to collusion.
- Contract awards could be “directed” to favored companies, regardless of qualifications or experience and over-billing and over-design is possible.
- Risk that materials can be procured inconsistent with specification and the implementation teams can pocket the difference.
- Risk of “kick-backs” where funds are irregularly channeled back to a supplier as part of a deal.
- Risk of local elite capture.

Additionally, inadequate payment validation procedures have been identified as a key risk<sup>19</sup>, as a result of:

- The geographical spread of project activities in up to 416 villages, 6 districts and 4 provinces and inherently weak and variable financial management capacity in the regions, which imposes substantial risks on financial management and accounting, and can limit appropriate payment validation.
- The Program’s plan to spend a significant amount on technical assistance consultancies, training, workshops, awareness campaigns and fellowships. These activities will be carried out at national, district and village levels. Such expenditures are often vulnerable to fraud and internal control lapses, as it is difficult to measure outputs realized, and to establish or verify satisfactory completion of work.

## Mitigation measures

### *1. Participation and Empowerment.*

The Program aims to legalize the rights of communities to collaboratively manage coral reefs and associated ecosystems. Moreover, the Program will provide funds directly to each of the up to 416 villages participating in the program. Through active participation in the implementation, the Program believes there is a greater likelihood that communities will demand services of the district governments and ensure that resources earmarked for effective management and improved livelihoods are accounted for in a transparent manner. The most important actions that will be taken include:

- The constitution of a Coastal Community Empowerment Board in each participating district that will include members of various stakeholders, such as program management staff, local government, civil society, private sector representatives, traditional leaders, etc. (members varies by District) and will be chaired by *Bupati*.
- Substantial community empowerment and capacity-building activities to ensure that public support is effective and sustainable beyond the life of the program, such as: basic social services,

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<sup>19</sup> Technical Annex 6(A): Procurement Arrangements, and Technical Annex 6(B): Financial Management & Disbursement Arrangements of the Project Appraisal Document.

social infrastructure, and income-generating opportunities to balance environmental and resource management with socioeconomic development.

- The provision of two-way radios and a special frequency for each village to communicate with other communities and other districts in the program, which will give the beneficiaries the opportunity to increase the level of communication and thereby increase the level of transparency in the program and with their participation.

### *2. Enhanced Disclosure Provisions and Transparency.*

The program will ensure disclosed materials are produced in a format appropriate for communities and readily available for public display at the information centers established in each participating program village. As such, informed community participation will ensure transparency and accountability of funds use. The most important actions that will be taken include:

- Public information centers in each participating program village will be established to ensure that the simplified information is available to beneficiaries.
- All final audit reports and the mid-term review will be made publicly available.
- All annual procurement plans and schedules will be made publicly available.
- All bidding documents will be made publically available in accordance with the World Bank procurement guidelines.
- All short lists of consultants will be made publically available in accordance with the World Bank consultant guidelines.
- The summary of the evaluation of all bids will be available to all bidders and parties submitting proposals for specific contracts, promptly after the notification of award to the successful bidder.
- Representatives of the end-users of the goods or works being procured at the District level will be able to attend the public bid openings.
- All bid openings will be public.
- All information regarding contracts awarded will be publicly disclosed.

### *3. Civil Society Oversight.*

The Program recognizes that greater oversight by civil society is essential to ensuring full transparency in the implementation of activities. As such, the Program involves a high degree of formal participation by NGOs, the private sector, and traditional/*adat* and religious leaders, through membership in the Coastal Community Empowerment Boards established in each of the six participating districts.

Moreover, the majority of the 50 Senior Extension and Training Officers (SETO's) and 200 Community Facilitators (CF's) will likely come from civil society. The most important actions to ensure civil society oversight that will be taken include:

- Members of civil society will participate in fiduciary monitoring activities and joint surveillance patrols as well as independent evaluations.
- An independent monitoring plan, involving CSO's (NGOS, universities and the local media) will be designed during the earliest stage of COREMAP Phase II to support national level monitoring (ME+F unit).
- The Program will encourage participation of the 'end users', or community representatives, as witnesses in the district level procurement process in order to increase the degree of transparency in the procurement process.

### *4. Strengthened Procurement Policies and Procedures*

In order to ensure transparent and well-advertised procurement, the Program has proposed the procurement procedures in Technical Annex 6 (A). The most important of these procedures include:

- All goods to be procured will require at least three quotations to limit monopoly.
- The following procurement policies will be implemented: (i) wider advertising in national and regional newspapers, (ii) removal of geographic and other restrictions, (iii) qualification which allows participation by all bidders in accordance with the World Bank procurement guidelines (iv)

complaints accommodated and adequately addressed, and (v) mis-procurement may be declared for any deviations from agreed policy.

- Independent technical assistance and capacity building specialist consultants, for procurement and financial management, will be hired in each district and at the national level to support NCU. They will work alongside the Programs national and district managers or “Pimpros” to ensure the timely preparation of contracts, review of proposals for funding, and the smooth execution of bidding procedures/contracts. Moreover, the Program will finance a financial management/micro-credit consultant to assist each program village creating a FM system.
- The Program will initiate financial management and procurement learning programs on all levels and additionally support the learning process with workshops and supervision and monitoring to point and correct mistakes as early in the program cycle as possible.

#### *5. Payment Validation and Accountability Measures*

Inadequate payment validation procedures have been identified as a key risk. To mitigate this, detailed procedures for validation of payments have been developed for each kind of Program activity (see Project Manual). Financial control requirements for each of these activities are different and payment validation procedures will be designed to strengthen controls and reduce risks of fraud and corruption. Actions that will be taken include:

- All community project activities will be reviewed quarterly by community-based organizations, and related information will be publicly disclosed in the villages concerned through the village information center.
- A list of all project officials who are authorized to commit funds and approve payments and their financial limits will be similarly publicly disclosed.
- For technical assistance, workshop and training activities or agencies receiving training, the participants will be required to confirm completion before training expenses are reimbursed to the provider.
- For community driven development activities, individual proposals approved will be disclosed through the village info center. Community groups eligible to receive program funds will be legally constituted and trained to keep simple accounting records for all receipts and expenditures, including supporting documentation. These will be subject to annual audit. Detailed formats for this will be described in the Program Manual.
- Withdrawals of funds from each village’s force account will require at least 2 signatories from community members. All transactions in Bank statements must be reflected in accounting records.
- The Program will set up a village financial management system, including bookkeeping, where village accountants will be trained and accredited. This system can account for village funds in a transparent and accountable way for the years of the program and for decades thereafter.

#### *6. Complaints Handling System*

A Complaints Handling System (CHS) will be established that provides all stakeholders with the opportunity to file a complaint when suspicion about corruption occurs. The exact procedure for complaints handling is described in more detail in the Program Manual. The most important actions that will be taken include:

- The CHS is designed to encourage local complaint resolution. This provides the opportunity to resolve the corruption issue on the same level (local, district, national) as where the complaint was filed. However, the actions, sanctions and remedies decided to mitigate the corruption issue are scrutinized by the levels above, and ultimately the ME&F are responsible for sound corruption mitigation on all levels. All complaints are reported to ME&F who maintain a comprehensive database of complaints. Each complaint needs to be proven, and if it is proven true, further action will be executed.
- An extensive financial and auditing system has been prepared as part of the Financial Management and Disbursement Agreements. Any suspicion about corrupt activities found in the existing auditing and reporting system will be reported through the Complaints Handling System.

- The program will have a monitoring system that is both internal and external. Internally the villagers themselves, field consultants, national level program staff, local government officials, and World Bank staff on supervision trip will monitor the program. An independent monitoring plan, involving CSO's (NGOs, universities and the local media) will be designed during the earliest stage of COREMAP Phase II to support national level monitoring (ME+F unit). Any suspicion about misuse will feed into the Complaints Handling System.

#### *7. Clear Sanctions & Remedies*

The most important sanctions and remedies are:

- Any individual can be prosecuted if relevant, competence, material, and sufficient evidence is available.
- In all procurement contracts, evidence of corruption, collusion or fraud will result in termination of the relevant contract, possibly with additional penalties imposed (such as fines, blacklisting, etc.), in accordance with Bank requirements and Government laws and regulations.
- Disbursement to any given location can be frozen or stopped completely if cases of abuse are not dealt with effectively. Furthermore, anyone hired under the program, including contractors and facilitators, will be given instant dismissal if proven guilty of corruption, collusion or fraud.
- Program implementation activities (components, subcomponents and activities) and the order in which they will be implemented will be phased, and will be outcome-oriented rather than driven solely by a set implementation time schedule.

## TECHNICAL ANNEX 8: ECONOMIC AND FINANCIAL ANALYSIS

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### OVERVIEW

Indonesia's coral reefs form the key ecosystem on which the majority of the coastal inhabitants of Indonesia rely for food, income generation, construction materials, and coastal protection. They are also of critical significance for science, education, pharmaceuticals, and global conservation and heritage. Healthy reefs can produce marine products worth \$15,000/km<sup>2</sup>/yr, and are an important source of food and economic opportunities for about 9,969 Indonesian coastal villages. According to the Food and Agriculture Organization of the United Nations (FAO), coastal and marine economic activities have been estimated to contribute some 25-30% to Indonesia's gross domestic product (GDP) and provide employment to about 20 million people. The reefs also play an important role in marine-based tourism, attracting divers and providing the source of white sand for beaches. The tourism value of coral reefs has been estimated at \$3,000/km<sup>2</sup>/yr in low potential areas to \$500,000/km<sup>2</sup>/yr in high potential sites. Fringing coral reefs also play key roles in dissipating wave energy, thereby protecting coastal lands from storms and wave erosion. The net benefits of coastal protection are estimated at \$25,000-550,000 per km<sup>2</sup> of reef, depending on the value of the infrastructure. For districts experiencing collapse of reef fisheries (e.g. Pangkep, South Sulawesi), this benefit will be real and quantifiable. For districts still in pristine condition the investment is to ensure prevention of the degradation and loss of revenue generating renewable natural resources.

Global biodiversity values are typically quite high but are difficult, if not impossible, for countries to evaluate. Estimates for Indonesia suggest that the reference values for global biodiversity are in the order of \$717/ha/yr for intact mangroves and \$8,529/ha/yr for coral reefs. After adjustment, the incremental benefit values for global biodiversity attributable to intact mangroves and coral reefs are \$43/ha/yr and \$2,808/ha/yr, respectively. Estimates of the global biodiversity incremental benefits are based on 4725km<sup>2</sup> of reef and related ecosystems directly targeted by the Program. These benefits are assumed to peak only after the 12<sup>th</sup> year of Program implementation. The detailed economic analysis based on tourism, fisheries and other local products is presented in Technical Annex 9. In the analysis, coastal protection benefits were not taken into account and nor were the global biodiversity benefits, which are difficult to quantify. However, these can be considered as additional economic justifications for the program.

**A. ECONOMIC ANALYSIS :** [NPV @ 10% over 25 years is US\$15.6m per District; EIRR = 18%]

**Background: The Value of Reefs.** Coral reefs and their associated ecosystems (i.e. small scale coral reef fishery, mangrove habitat, etc.) are the source of livelihood for hundreds of thousands of Indonesian subsistence fishers, and a source of food security for unemployed agriculturalists in times of economic hardship. As mentioned above, the reefs serve many ecological and welfare improving functions. A recent World Resources Institute paper (Burke et al, 2002) estimated the potential sustainable annual economic net benefits of healthy reefs in Southeast Asia. The results per square kilometer of reef are given in Table 8.1.

**Table 8.1: Potential Sustainable Annual Economic Net Benefits per Km-Sq. of healthy coral reef in Southeast Asia.**

RESOURCE USE (DIRECT AND INDIRECT)	PRODUCTION RANGE	POTENTIAL ANNUAL NET BENEFITS (US\$) (RANGE)
Sustainable fisheries (local consumption)	10 – 30 t	\$12,000 – 36,000
Sustainable fisheries (live fish export)	0.5 – 1 t	\$2,500 – 5,000
Coastal protection (erosion prevention)		\$5,500 – 110,000
Tourism and recreation	100 – 1000 persons	\$700 – 111,000
Aesthetic/biodiversity value (WTP)	600 – 2000 persons	\$2,400 – 8,000
Total (fisheries & coastal protection only)		\$20,000 – 151,000
<u>Total (including tourism potential)</u>		<u>\$23,100 – 270,000</u>

Source: Reefs at Risk in Southeast Asia (Burke et al. 2002)

Yet, despite their high potential values, the quality of coral reefs in Indonesia is declining rapidly. Even remote reefs in unpopulated areas are not free from man-induced deterioration. At the moment, only 29 percent of Indonesian reefs are in good condition (that is, with more than 50 percent live coral cover). In most areas, a variety of human-induced threats are responsible for the degradation of reefs. The relative importance and the type of threats vary tremendously per location. Powerful economic forces are driving the observed destructive patterns of coral reef use, often rendering short-term economic profits, sometimes very large, to selected individuals.

Measures for coral reef protection are often presumed to conflict with economic development, and are said to require a sacrifice of economic growth. However, this perception stems mainly from a failure to recognize the magnitude of costs to the present and future economy resulting from reef degradation. Table 8-2 adapted from Cesar et al. (1997) shows the benefits to individuals and losses to society from each square kilometer of coral reef destruction, providing an economic rationale for preventive or remedial efforts. For coastal protection and tourism losses, both 'high' and a 'low' scenario estimates are presented, depending on the types of coastal construction and tourism potential. "High" cost scenarios are indicative of sites with high tourism potential and coastal protection value. "Low" cost scenarios are indicative of sites with low tourism and coastal protection value.

Some of the most important values of coral reefs, such as those to future generations and intrinsic values, cannot be quantified. However, since the economic benefits from reef destruction are often used to justify continuation of these destructive practices, quantifying the costs associated with coral reef degradation is important to make a balanced assessment of the benefits and costs of various threats.

The analysis is mainly based on observable data such as the value of the decline of fish catch or expenditures by hotels on groins to temporarily prevent beach erosion. Total costs should thus be interpreted as rough estimates of the lower range of true costs associated with reef destruction. The numbers in Table 8.2 are generated on the basis of available data, using hypothetical examples of sites subject to one individual threat.

**Table 8.2: Total Net Benefits and Losses Due to Threats to Coral Reefs in SE Asia (Net Present Value in US\$000 per km-sq.)**

Threats	Net Benefits	Net Losses to Society				Total Net Losses (quantifiable)
	Total Net Benefits to Individuals	Fishery	Coastal Protection	Sustainable Tourism	Others (e.g. biodiversity)	
Poison Fishing	33	37	n.q.	3-409	n.q.	40-446
Blast Fishing	15	80	8-170	3-450	n.q.	91-700
Coral Mining	121	87	10-226	3-450	> 67	167-830
Sediment (logging)	98	81	n.q.	192	n.q.	273
Overfishing	39	102	n.q.	n.q.	n.q.	102

Source: Adapted from H. Cesar et al., "Indonesian Coral Reefs -- An Economic Analysis of a Precious but Threatened Resource," *AMBIO* 26, 1(1997): 345-358.

Notes: -- n.q. = not quantified.; The data presented above are for Southeast Asia (Table 8-1) and for Indonesia (Table 8-2) as a whole. For the program, a cost benefit analysis (CBA) was carried out for the 6 target districts. The advantage of an analysis at a district level is the actual use of real site data, rather than having to rely on general region-wide data.

**Analytic Framework & Assumptions.** A cost benefit analysis (CBA) was carried out for the program, and based on analysis of each of the six proposed districts for inclusion in phase two. The CBA at the district level captures the following three main quantifiable benefits: (i) benefits from improved fisheries, (ii) benefits from local products derived from sustainable coral reef activities and (iii) associated ecosystem use (including recreation and tourism). Program benefits are carried forward 25 years, which is the evaluation time horizon for the analysis. Significant benefits are expected to come from the fisheries sector: the voluntary closure of reef areas by communities is expected to stabilize reef fish yields compared to the 'without project' scenario where yields are expected to gradually decline over time. This rationale is in line with the recent literature on the economics of no-take zones, or fish sanctuaries or fish banks, as summarized in Roberts et al. (2001).

Funds demarcated to each village for alternative income generating activities are assumed to ensure that fishing pressure in the areas outside the no-take zones is not increasing with the closure of specific areas. This analysis conservatively hypothesizes in the 'central' estimate, that current reef fish yields will be maintained over time, after an initial drop due to the introduction of no-take zones. However, it is clear that in well managed reefs areas, the fishery production significantly increases. In the 'without' program scenario, the fisheries benefits decline gradually over time until 50% of current fish catch levels. At 50% of current levels in program areas, the fishery is assumed to have collapsed and is no longer able to sustain local populations. Due to lack of reliable reef fisheries yield data (except in Wakatobi National Marine Park, Buton District) where the Bank financed the collection of 10 months of catch data), these data were calculated based on total reef area per district, local reef quality and assumed yields per level of reef quality based on data from well managed reefs of similar type elsewhere in the world.

- Reef Quality (and therefore reef fisheries catch) is indexed from 1 (poor quality) to 4 (pristine) based on expert scientific assessment and relevant data available such as that found in (McAllister, 1998).
- Fisheries Values (metric tons/km<sup>2</sup>/year). It is assumed that a low reef value of 1 corresponds with a catch of 5 metric-tons/km<sup>2</sup>/year, while a level 2, 3 and 4 correspond with catches of 15, 25 and 35 mt/km<sup>2</sup>/yr, respectively.
- Tourism levels were estimated for each of the districts. Tourism is assumed to increase at 5% per year in the 'central' estimate based on the enhanced attraction of the area due to the marine parks and marine tourism parks in the districts.
- Benefit Transfer was used to estimate the value of 'other local products' (see Ruitenbeek, COREMAP-ABD: Financial and Economic Analysis, 2002).

The data are summarized below in the below table.

**Table 8.3: Economic Data used in Economic Valuation for the 6 Program Districts**

	Pangkep	Selayar	Buton	Raja Ampat	Biak	Sikka
Total District Program Costs <sup>a</sup> (US\$ million) for 6 years	6.6	7.1	10.0	7.9	8.2	6.8
Fisheries Value (2003) in mill. US\$	2.4	8.1	7.3	17.2	3.6	0.8
Local Products (2003) in mill. US\$	1.5	4.4	5.6	5.2	1.7	0.5
Tourism Value (2003) in mill. US\$	0.1	0.4	1.6	0.2	0.1	0.2
Reef Area (km <sup>2</sup> )	374	1098	1402	1300	424	128
Reef quality index (scale 1-4)	1.8	2.0	1.6	3.2	2.3	1.7
Number of fishers	35,000	18,100	60,700	10,700	21,000*	4,300

<sup>a</sup> \$Millions, excluding district monitoring; \*District estimate

Bank-GEF financed COREMAP Phase II in eastern Indonesia involves nearly 5,000 km<sup>2</sup> of some of the most pristine reefs in Indonesia. Hence, apart from quantifiable benefits, there are a host of other benefits, such as global biodiversity that are difficult to quantify. While global benefits due to enhanced biodiversity conservation have not been used in the above estimates, Ruitenbek (1999) estimates the benefits of maintained or improved marine biodiversity at US\$8,500 per hectare, far exceeding those values used in this analysis and presented in the above table.

**The overall results** from the COREMAP District CBA is presented in Table 8.4. The quantifiable economic internal rates range from 8% in Sikka district to 22% in Raja Ampat district. The differences can largely be explained from the relative size and health of the reefs in the different districts. As the benefits vary much more than the costs of addressing the problems, project management of the relatively smaller, less intact reefs has a much lower rate of return than larger, more pristine areas. As a result of this analysis and discussions with Sikka District government, a less intense (and costly) program is designed to maximize the benefits per unit area of reef.

**Table 8.4: Economic Rates of Return for the 6 Project Districts ('central' estimat)**

	Pangkap	Selayar	Buton	Raja Ampat	Biak	Sikka
EIRR 'central' (%)	13	20	20	22	13	8

**Sensitivity and Risk Analysis.** These estimates are rather sensitive to the assumptions, especially those related to trends in fish yields over time. If the co-managed no-take zones are less effective, (e.g. because of continued illegal and destructive fishing practices in these areas), the EIRRs decline significantly. This analysis also highlights the importance of sustainable enforcement of the no-take zones. Over 100,000 fishers in the program area (6 districts) are involved in reef-related fishing and are among the Program's key stakeholders. Under the program, their incomes will stabilize as compared to the 'without project' case, where incomes are decreasing every year, with a 50% or more drop assumed over the next 25 years without this program. The detailed CBA results are available in the program files.

**Table 8.5: Economic Rates of Return for the 6 Project Districts ('central' estimate and sensitivity)**

	Pangkap	Selayar	Buton	Raja Ampat	Biak	Sikka
EIRR 'central' (%)	13	20	20	22	13	8
EIRR high (%)	25	44	40	51	26	16
EIRR low (%)	Undefined	undefined	4	1	undefined	Undefined

**B. FINANCIAL ANALYSIS:** [NPV @ 10% over 25 years is US\$21,600 per village; FIRR = 29%]

A detailed financial analysis was carried out for alternative income generation micro-enterprises likely to be supported under the project. The financial analysis estimated requirements for (i) capital investment and working capital; (ii) profit and loss statement; and (iii) financial planning cash flow. The financial rates of return range from 16 to 59 percent, with 29 percent for a representative package of micro-enterprise investments. When risk factors over and beyond normal business risk were added, the switching values - the values for which the FRR equals the opportunity cost of capital - were obtained at a 15 percent decrease in revenues and at a 70 percent increase in investment costs.

Provided that user rights and collaborative reef management regimes can be effectively sustained, reef management can yield benefits relatively quickly through increased reef fisheries productivity. Reef sanctuaries can typically benefit surrounding fishing areas within a period of 3-7 years, depending on the species. The financial rate of return for average reef sanctuaries in the Philippines is 28 percent, indicating that recurrent expenditures are more than offset by management benefits. Nonetheless, reef sanctuaries result in closures of 20-30 percent of the reef area, imposing short-term costs to traditional fishers. In Taka Bone Rate National Marine Park, these losses are estimated at an equivalent of US\$28,000 per village over a period of six years, using conservative assumptions of reef recovery. Hence, an initial subsidy equivalent to the projected loss per village for alternative income generation and reef-caring infrastructure, as determined by the program is considered justified.

**C. FISCAL IMPACT ANALYSIS**

An analysis of financial soundness including an examination of the fiscal sustainability of the proposed program (including incentives for maintaining and operating the program effectively) was undertaken. This includes an evaluation of the impact of the program on government finances, taking into account (a) the incremental taxes and subsidies that would result from the program; (b) the increase in recurrent costs resulting from the program and the prospects for financing these; (c) each district government's current fiscal situation; and (d) the availability and certainty of counterpart funds for the project (see Technical Annex 7: Sustainability for a detailed estimate of local government's financial responsibilities leading to the end of the second phase).

In accordance with KMK 35, each of the proposed 6 Districts for inclusion into the program's first three years prepared detailed district programs. With the initial injection of program capital and based on the success of effective collaborative management of reef resources, each district is likely to derive significant positive fiscal benefits as conveyed in the final column of Table 8.7.

Besides, there will be additional fiscal advantages to the district from potential increased tourism revenues in the sites. Tourism is expected to increase with over 220% over the coming 25 years if the marine protected areas are managed effectively.

Each district will contribute at least 10% of total district program costs, a share that would increase after three years of program participation. This amounts to approximately \$0.5 million per district. District officials: District Head (Bupati) and District Parliament (DPRD) have officially agreed to the counterpart budget required to co-finance the Bank-GEF funds. Central Government Ministries will finance approximately US\$10 million (10%) of total program costs. Most of GOIs contribution will be in the form of central Government expenditures and thus is not expected to result in a significant fiscal impact. Should there be an extreme devaluation of the currency -75 percent from the negotiation period estimates, GOI and the Bank would consider, at mid-term review, whether to cancel the unutilized funds or to re-allocate them to incremental program outputs.

Table 8.7: Estimated Reef Fisheries Benefit and District Fiscal Impact Resulting from Effective Collaborative Management of Resilient Marine Conservation Areas

District	Reef and related ecosystem area (km <sup>2</sup> )	Degraded fisheries yield per year (5 T <sup>-km<sup>2</sup></sup> )	Managed fisheries yield per year (30T <sup>-km<sup>2</sup></sup> )	Approximate \$ benefit from managing fisheries (25T @ \$1,972. T <sup>-1</sup> )
Pangkep	374	1,870	11,220	22,125,840
Selayar	1,098	5,490	32,940	64,959,656
Buton	1,402	7,010	42,060	82,944,844
Raja Ampat	1,299	6,495	38,970	76,851,178
Biak	424	2,120	12,720	25,084,603
Sikka	128	640	3,840	7,572,710

Note: T = tons

## Technical Annex 9: Incremental Cost Analysis

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### Context and Broad Development Goals

Indonesia is at the epicenter of global biodiversity of corals, reef fish, molluscs and crustaceans. It also has the largest coral reef area of any country in the world with around 18% of the world's total (Wilkinson, 2002). The quality of Indonesian reefs has, however, declined over the last decade. Recent monitoring data from 520 stations throughout Indonesia indicate that 66% of Indonesia's reefs are in poor to fair condition (Wilkinson, 2002). Also, a recent study indicated that 47% of Indonesia's reefs are at high to very high risk (WRI, 2002). Threats include overfishing, destructive fishing (cyanide and bombing), pollution, sedimentation and uncontrolled tourism development. Studies financed by COREMAP Phase I generally confirm these findings.

Yet, there are signs of improvement. Taka Bone Rate, one of the two COREMAP GEF Phase I sites, witnessed a significant increase in coral cover by 6.3% from 23.8% to 30.1% over a 2 year monitoring period due to the engagement of communities of setting aside no-take zones. Such increases in coral cover go hand in hand with improvements in fishery production (and therefore community livelihoods) that reefs provide, as well as biodiversity. Global biodiversity values are typically quite high but are difficult, if not impossible, for countries to evaluate. Estimates for Indonesia suggest that the reference values for global biodiversity are in the order of \$717/ha/yr for intact mangroves and \$8,529/ha/yr for coral reefs. After adjustment, the incremental benefit values for global biodiversity attributable to intact mangroves and coral reefs are \$43/ha/yr and \$2,808/ha/yr, respectively. These numbers would justify significant international grant financing.

The COREMAP Program consists of three phases, implemented over 15 years. GEF supported the first phase, and will scale up activities in the second phase. The incremental cost analysis discussed here is specifically for proposed GEF-financing of Phase II. By the third phase, institutionalization of the project should have reached a level where GEF financing along the lines proposed for Phase II is likely, particularly since Phase II is addressing financial sustainability up-front (see revised objectives since Phase I). COREMAP is consistent with Indonesia's Biodiversity Action Plan, Agenda 21, the Convention on Biological Diversity, GEF's Operational Program on Marine, Coastal, and Freshwater Ecosystems, and guidance from the three Conference of Parties. It specifically responds to the Jakarta Mandate stressing conservation and sustainable use of marine ecosystems with wider endorsement from the G8 plus UN Organizations (see PAD Section A.2).

#### Baseline Scenario for Phase II

*Scope and Costs:* Under the baseline scenario, it is anticipated that GOI would begin implementation of COREMAP initiatives at the national level and in 6 districts (Pangkep, Selayar, Buton, Raja Ampat, Biak and Sikka), including 2 National Marine Parks and at least 4 KSDAs in these districts. This baseline (borrowed funds plus GOIs, including local governments' own resources) sets the tone for behavioral changes of communities away from reef destructive activities, from which GEF resources would be used to further strengthen. Moreover, the Baseline Scenario would focus on interventions having direct or indirect impact on livelihood opportunities for reef-dependent local communities.

The baseline scenario has three major elements:

(a) Institutional Strengthening, supporting a National Coordination Unit (NCU) at the national level that coordinated all program activities in 2 national marine parks and 6 districts (Pangkep, Selayar, Buton, Raja Ampat, Biak and Sikka). Key activities financed include mechanisms to better coordinate a national program and strengthening national marine park and KSDA authorities to collaboratively manage marine

protected areas. Moreover, legal support to prepare and enact *perdas*' and *perdes*' empowering communities legal rights to collaboratively manage coral reefs and associated ecosystems is provided. The baseline costs for this component are estimated at approximately US\$ 17.0 million. No GEF financing is anticipated to support this component. However, it sets up the rationale for GEF-incremental financing for the next component.

(b) Community Based and Collaborative Management, supporting a comprehensive program to engage and empower up to 416 villages (over 750 communities/sub-villages/*desuns*) located in 6 districts that contain reefs that have globally significant marine biodiversity. Moreover, 2 national marine park authorities and 4 KSDA authorities would be strengthened to work in partnership with district government and empowered communities and plan for sustainable use of coral reef ecosystems (and halt destructive practices). Multi-sectoral District Program Management Units (PMUs) are also supported under this component. This component would finance collaborative management training for key stakeholders, community support services such as facilitation and extension for villages, sub-district workshops, support to prepare coral reef management plans for each participating village, support to create a participatory district marine conservation plan that builds from the coral reef management plans, surveillance equipment (such as boats, etc), an extensive radio/communication network for all villages, support for community facilitators, senior extension training officers, and village motivators. The baseline costs for this component are estimated at US\$ 36.6 million. All GEF resources will be applied as co-financing this component.

(c) Public Awareness, Education and Sea Partnership program, both at the national and district level. This component would include mass-media campaigns, outreach programs and materials, dissemination of COREMAP guidelines and awareness building workshops. It builds upon the award winning public awareness campaign financed in COREMAP Phase I. Baseline costs for this component are approximately US\$13.0 million.

*Benefits.* Implementation of the Baseline Scenario investment program will be important to ensure minimum commitment to conservation of Indonesian coral reef resources, both at the site level as well as for the country in general. The Baseline Scenario would also lead to greater institutional capacity, general public awareness, and a stronger framework for coordinated reef management in Indonesia.

The Baseline Scenario would, however, be insufficient to ensure the *effective* conservation and collaborative management of the national and regional marine parks-- sites of high biodiversity importance (according to comprehensive scientific investigation financed through project preparation and independently confirmed by internationally renowned conservation NGOs such as TNC, WWF and CI, as well as coral reef areas of significant global biodiversity found *outside* of these marine parks. The reason is that from local communities and regional governments' perspectives, the development priority is around hard income generation activities, which are not perceived to come from effective conservation measures. The program aims to change this misperception. The Baseline, therefore, would not be sufficient to ensure that high priority coral reef conservation areas are included in national COREMAP program strategies. The Baseline Scenario would also be insufficient to ensure effective enforcement in sites of high biodiversity importance, an effective involvement of NGOs in field activities, and a public dissemination of lessons of experience, particularly amongst non-governmental stakeholders.

## **Global Environmental Objective**

The global environmental objective of the GEF Alternative is to protect, rehabilitate, and achieve sustainable use of coral reefs and associated ecosystems in eastern Indonesia. The proposed GEF Alternative project (co-financing the larger program) aims to address the management-related underlying causes of biodiversity loss and degradation by investing in the management of two marine protected areas and three marine tourism parks, and their buffer zones, key priority districts (Sikka, Selayar, and Raja Ampat) as well as in crucial workshop/training and technical assistance in conservation and sustainable use of globally significant coral reef resources.

## GEF Alternative in Phase II

*Scope and Costs.* Under the GEF Alternative, an expanded program would be undertaken, comprising activities focusing on empowering communities to sustainably co-manage the coral reef ecosystems. This implies providing an incentive for them and local governments to do so, namely, focusing on a two-fold approach of coastal poverty alleviation through the sustainable use of reef resources (generating domestic benefits), as well as protection of coral reef ecosystems of global significance. It is envisaged that the GEF alternative would supplement the components of the Baseline Scenario through the following additional activities:

(1) Overall, provision of resources to support incremental activities in two national marine parks and 4 KSDAs, in addition to three key districts (Raja Ampat—considered the bulls-eye of global coral reef biodiversity, Sikka, and Selayar) where it has been scientifically validated that reefs of global biodiversity significance exist outside of the park boundaries. While GEF resources are applied across all Phase II sites, a significant proportion of these funds are applied to the abovementioned districts to serve as counterpart financing in order for the program to maintain its decentralized implementation structure, maintain compliance with KMK35 as well as compliance with the Independent Evaluation’s key recommendation: to support a nationally coordinated and decentralized collaborative management project. The incremental funds only support those activities that satisfy GEF criteria. Moreover, without use of these funds, these key districts would not be able to participate in the project. The incremental allocation for these districts are as follows:

**Table 9.1**  
**Financing Arrangements for 3 Phase II Districts Mapped as Medium Fiscal Capacity**  
**Assuming Non-Cost Recovery & On-Granting Scheme**

District	Total Cost to be Financed By District	% District Counterpart	% of total cost financed by GEF Grant (as counterpart for District)	Total District Counterpart
Raja Ampat	\$6.1m	10	30	40%
Sikka	\$5.3m	10	30	40%
Selayar	\$5.2m	10	30	40%

**Table 9.2**  
**Total Estimated Costs for 6 Year Program By District;**  
**Total Counterpart Required of District Over 6 Years; Amount of GEF Resources Applied to Each Middle Fiscal Capacity District to Ensure District can Satisfy KMK35 Regulation And Participate in Program**

District	Total Cost to be Financed By District	\$ Paid By District As Counterpart	\$ cost financed by GEF Grant (as counterpart for District)	Total District Counterpart
Raja Ampat	\$6.1m	\$615,300	\$1,846,000	\$3,692,000
Sikka	\$5.3m	\$531,000	\$1,593,000	\$3,186,000
Selayar	\$5.2m	\$520,000	\$1,560,000	\$3,120,000

More specifically, GEF financing is applied to support the following incremental activities:

(2) Surveillance and enforcement equipment to reduce destructive coral reef fishing practices (\$0.39 million); (3) Communication equipment (radios) and Goods (office furniture, computers, and database) to support surveillance efforts and connect villages, districts, and national coordination units (\$0.46 million); (4) Technical assistance to national and district levels through a marine protected areas specialist: (US\$

0.41 million); (5) Key studies to underscore the ecological importance of key coral reef areas (\$0.04 million); (6) Community Support Services in the form of community facilitators, motivators, and senior extension and training officers to build upon the empowerment model tested in Phase I (\$2.85 million); (7) Improved community based and collaborative resource management through: (i) enhanced collaborative enforcement; (ii) support for cyanide detection mini-labs; and (iii) legal expenses (e.g. support for community law drafting), (iv) learning exchanges, workshops, on the job training, local and international study-tours, cross exchanges with GEF-financed Targeted Coral (8) Reef Research Initiative (TR) based in Philippines to support the development of village coral reef management plans, setting up community no-take areas, collaborative management, and supporting awareness of coral reef biodiversity conservation and the link to fisheries production (US\$ 1.26 million); (9) Establishment of park advisory boards in 2 national and at least 4 regional marine parks under the project, including support for national and district marine park policies, based on reassessing park zonation, and preparation of district marine conservation area plans; (10) Operational Support for effective management and operation of the 2 marine parks and 4 marine tourism parks (\$1.0 million).

## Benefits

In addition to the national benefits associated with the Baseline Scenario, global benefits of the GEF Alternative include (i) protection of globally significant biodiversity in 6 priority coral reef ecosystems; (ii) pilot demonstrations, replicable elsewhere in Indonesia and Southeast Asia; (iii) improved collaborative management of 2 marine tourism parks, 1 marine wildlife reserve, at least 4 marine tourism parks areas of global coral reef biodiversity outside of these parks.

## Incremental Cost Matrix

The total costs of the Baseline Scenario are estimated at US\$66.8 million in Phase II. The GEF Alternative is estimated at US\$74.3 million for the same phase. The incremental costs of the GEF Alternative are therefore estimated at US\$7.5 million is therefore requested to support the program.

**Table 9.3: Incremental Cost Table**

Component/ Sub-component	Cost Category	Phase II USD\$ million	Domestic Benefit	Global Benefit
A. Inst. Strengthening	Baseline	17.1		
	With GEF Alt.	17.1		
	Incremental	0		
B. Community Based & Co-Management	Baseline	36.6		
	With GEF Alt.	44.1		
	Incremental	7.5		
B1. Community Empowerment	Baseline	35.0	See DB Baseline 1	
B2. Community Based Resource Mgmt	With GEF Alt.	40.0	See GEF Alt 1	See GB 1
B3. Community Development	Incremental	5.0		

B5. Marine Park Support	Baseline	1.7	See DB Baseline 2 See GEF Alt 2	See GB 2
	With GEF Alt.	4.2		
	Incremental	2.5		
C. Public Awareness, Education and Sea Partnership	Baseline	13.0		
	With GEF Alt.	13.0		
	Incremental	0		
	Total Baseline	66.8		
	Total GEF Alt.	74.3		
	Total Incremental:	7.5		

DB Baseline 1: Activities to support community empowerment, community-based resource management and community development in 6 districts to enable better livelihoods and better coral reef conservation;

GEF Alt 1: Support for ensuring collaborative management approach is adopted and mainstreamed outside of national marine parks; Additional SETO and Facilitator funding to boost awareness and enhance socialization process; Support for village coral reef information centers to increase the support for coral reef management and no-take zones; Improved collaborative enforcement in all sites to increase the effectiveness of no-take zones; Additional support for cyanide detection mini-labs to increase the effectiveness of managing the live food fish trade and aquarium fisheries; Enhanced legal expenses (e.g. support for community law drafting);

Global Benefit 1: Protection and collaborative management of exceptional globally significant biodiversity in all sites;

DB Baseline 2: Enhanced national, provincial, and district level government (and NGO) institutional responsiveness to meet the needs of coastal communities and to support collaborative management

GEF Alt 2: Improved management of two marine parks (Taka Bone Rate in South Sulawesi and Wakatobi in Southeast Sulawesi) and four marine tourism parks (Kapoposang Protection Area in South Sulawesi, Raja Ampat in Papua, Padaido Islands in Papua, Marine Park in Sikka, NTT) thereby improving the livelihoods of poor local communities in these parks and buffer zones; Additional technical support for marine parks to enact collaborative management; Additional money for training and workshops on marine conservation, biodiversity, sustainable reef fisheries, etc.

Global Benefit 2: Protection of exceptional globally significant biodiversity in 2 national marine parks and at least 4 KSDAs; Pilot demonstrations, replicable elsewhere in Indonesia and Southeast Asia;

## TECHNICAL ANNEX 10: SAFEGUARDS POLICY ISSUES

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

COREMAP Phase II is a program in which the specific safeguard applicable activities to be financed cannot be known at the time of Appraisal. Their impacts, therefore, cannot be fully analyzed during project preparation. In such cases, the Bank requires a framework document that sets out the policies and procedures to be followed during program implementation to insure safeguards compliance. An Environment and Social Impact Management Framework (ESIMF) has been prepared by GOI and is included as an Annex to the Government's national Program Implementation Plan (national PIP). This framework has been reviewed and found generally acceptable for COREMAP Phase II by the Bank task team. It is envisaged that this framework can be utilized as the main vehicle for communicating the safeguards requirements of the program.

The ESIMF is the roadmap for review of program activities as well as screening procedures to insure application of sound environmental practices. Formally, overall environmental oversight of the program is legally to be undertaken by the State Ministry for Environment. However, in actuality, practical management of Safeguards compliance will be the responsibility of each District Program Management Unit (PMU), with oversight from the National Coordination Unit (NCU) in Jakarta. The NCU will insure that the ESIMF is applied by each District PMU and other institutions undertaking investments at the village level (e.g., village government, communities, BMTs). Subprojects at all levels will only be approved after confirmation is made that the subproject is in compliance with the ESIMF. In addition, the independent monitoring and evaluation contractor supported by the program will review safeguards compliance and report findings to the Bank and the NCU.

The ESIMF provides detailed information on the following topics:

- Procedures to be followed for the environmental assessment process;
- Institutional responsibilities for undertaking environmental assessments;
- Indicative list of subprojects likely to be financed (i.e., positive list);
- Potential adverse environmental impacts of indicative subprojects;
- Possible mitigation measures for adverse environmental impacts of indicative subprojects;
- Types subprojects ineligible for support under the program (i.e., negative list);
- Provision of an environmental assessment framework to guide program implementation;
- Explanation of Bank subproject categorization, terminology and methodology;
- Detailed information of specialized Bank safeguard policies in regard to:
  - (i) natural habitats; (ii) forestry; (iii) pest management; (iv) cultural property; (v) indigenous peoples; (vi) involuntary resettlement; (vii) dams; (viii) international waters;
  - (ix) disputed areas; and (x) social considerations;
- Methods to incorporate environmental assessments into subproject design;
- Recommended monitoring and evaluation program; and
- Draft environmental assessment check list for subproject evaluation.

COREMAP Phase II has been classified in Safeguards Category S2 and Environmental Assessment Category B. A few safeguard policies are triggered, but effects are limited in their impact and are technically and institutionally manageable. Some environmental analysis may be needed. However, a full environmental assessment is not required. Apart from Operational Policy (OP) 4.01 on Environmental Assessment, the Program triggers the following safeguard policies: Natural Habitats (OP 4.04); and Indigenous Peoples (OD 4.20). The justification for the application of these policies and remediation is summarized below, and were further reviewed at a Safeguards Review Meeting on October 28, 2003.

*Environmental Assessment.* Some of the small-scale infrastructure and alternative income generating (AIG) subprojects that could be financed have the potential to cause adverse impacts, albeit limited in extent and significance. The safeguards screening process will be applied insuring avoidance of any major adverse environmental impacts. The screening process excludes large scale subprojects, which in any case exceed village funding capacity. Consequently, subprojects are not expected to have any major significant, complex or irreversible adverse environmental impacts. Also no works will be undertaken that could affect protected or vulnerable natural habitats.

*Natural Habitats.* Bank policy prohibits conversion of valuable natural habitat except under very unusual circumstances. The program seeks to protect coral reefs and associated ecosystems, which are currently under threat from destructive practices. Thus, the entire program is designed to strengthen natural habitat management based on sustainable community management.

*Indigenous Peoples.* Isolated vulnerable peoples, such as migratory Bajo fishers, are known to be in the program area. The program design takes their cultural uniqueness, local languages and needs for access to resources into consideration. In fact, the program has already engaged the Bajo people in Buton District in a meaningful way. They have been included in program formulation and their unique educational and livelihood needs are addressed through program activities.

As mentioned previously, mechanisms to monitor safeguards are included within the program design. The PMU will be responsible for supervising the implementation and monitoring of the safeguards framework. The Senior Extension Training Officers (SETOs), Community Facilitators (CFs) and Village Motivators (VMs), who report through to the PMU, will instruct communities on the use of the Safeguards Framework and then monitor the implementation of community proposals. These facilitators will ensure that communities follow appropriate guidelines. Progress reports, provided to both the Bank and the NCU, will include a review of any potential environmental and social issues and mitigation measures taken or recommended. The NCU will review the reports. If deficient, it will provide appropriate recommendations to PMU, which will pass on instructions to the facilitators.

While there is no requirement for consultation with stakeholders on frameworks for Category B projects, extensive consultation has taken place because COREMAP Phase II's success, including safeguards compliance, depends so much on bottom-up planning and ownership at the district and community levels. The ESIMF has been reviewed by each District PMU and was formally endorsed by each participating District's Legislative Assembly (DPR) in December 2003.

### **Environmental Impacts of External Projects**

Most commonly discussion of environmental impacts focuses on managing a project's potential impacts on the social and natural environment. Of perhaps greater concern for COREMAP Phase II is the possibility that public or private sector developments undertaken in the vicinity of COREMAP sites could have negative impacts that would detract from, or completely offset, improvements in coral reef management and conservation. Mining operations, refineries and major port facilities are examples of such developments.

Under COREMAP Phase I, provisions were included in the legal documents and the Project Appraisal Document (PAD) to afford enhanced protection for the program sites. Similar measures adjusted to be: (i) consistent with the decentralization of the authority for environmental assessment, investment project approval, and impact management; and (ii) more strongly worded are recommended for inclusion under COREMAP Phase II

GOI regulations require that any proposed investment activity adjoining a coral reef area, or changing its characteristics, regardless of its scale, be subject to a full environmental assessment (ANDAL). To strengthen this requirement, the following procedures are recommended as a covenant in COREMAP Phase II loan and grant documents:

- (i) GOI will notify all agencies at the program sites of the ANDAL requirement;

- (ii) BAPPENAS will receive copies of ANDAL terms of reference and reports for review by the NCU and the Bank;
- (iii) Local officials, representatives of civil society and NGOs will be invited to ANDAL reviews;
- (iv) NCU will insure that ANDALs cover any possible impacts on program sites and that appropriate quantitative techniques are used; and
- (v) any development project for which an ANDAL indicates adverse impacts on a Program site, which cannot be effectively mitigated, will be denied; and Bank and NCU approval will be required for ANDAL approval.

## **INDIGENOUS PEOPLES**

**COREMAP Phase II Focus on Coastal Indigenous Peoples.** The World Bank's operational policies (O.D. 4.20) are designed to ensure that indigenous peoples benefit from development projects, and the second phase of the COREMAP program is aimed squarely at empowering coastal indigenous peoples of Indonesia to more sustainably manage their coral reef ecosystems and fisheries. According to World Bank policy, indigenous peoples (or indigenous ethnic minorities) are defined as social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process. Because indigenous ethnic minorities (Indonesian Bajo communities) meeting this definition are intended to be direct beneficiaries of the second phase program, the provisions of the Bank's operational policy (OD 4.20) apply to COREMAP Phase II in its entirety.

Since the provisions of the World Bank's indigenous peoples policy apply to COREMAP Phase II in its entirety, the preparation process has closely followed the policy's strategy that issues pertaining to indigenous peoples must be addressed based on informed participation of the indigenous people themselves. The preparation process for COREMAP II centered around a series of participatory stakeholder consultations throughout the six districts where Phase II will be implemented, in order to ensure participation of indigenous peoples in the design. Furthermore, a detailed social assessment of indigenous ethnic minorities in Phase II districts (entitled *Developing Ethnic Specific Strategies for Marine Conservation and Coastal Resource Management: Assessing Local Capacity in Relation to the Bajo Peoples of Buton, Southeast Sulawesi*) was conducted during this preparation process.

According to this and other social assessments conducted during the preparation of COREMAP Phase II, the sea-dwelling Bajo peoples are an indigenous ethnic minority living in self-contained and often geographically isolated coastal communities in each of the 6 Phase II districts and throughout much of eastern Indonesia. For example, in the Phase II district of Buton, land dwelling communities are almost exclusively peoples of Butonese origin, whereas the Bajo peoples in this district are migratory and landless, tending to build their villages on shallow intertidal marine flats located away from the Butonese populations. These Bajo communities are characterized by their dependence upon coral reef ecosystem resources as well as the destructive fishing practices they often use, and the subsequent reef degradation, declining fish returns and subsequent downward spiral of poverty. Thus, these indigenous ethnic minorities in coastal areas of Indonesia, the Bajo, are both the most dependent upon coral reef ecosystems and the greatest threats to reefs.

For this reason, the Bajo peoples are also the greatest hope for realizing the objectives of the second phase of COREMAP, because they have the greatest stake in sustainably managing the coral reef ecosystems and can most directly reduce many of the threats these systems face. The second phase of COREMAP will target activities directly to the Bajo peoples in Phase II districts, based on Bajo Action Plans developed for each district, such as the one developed for the District of Buton during preparation.

**Buton District: An Example of COREMAP II's Focus on Indigenous Peoples.** According to the Bajo Action Plan for Buton (one of the six districts where the Phase II program will be implemented), in the Wakatobi National Marine Park there are a total of five Bajo communities, all of which vary tremendously in ways such as size, level of political representation, economic well being and fishing practices. Despite these differences, the Bajo peoples of Wakatobi also share a common history and each of the communities are linked both by close familial ties and frequent travel and trade that is known to

take place. The table below gives a more detailed summary of some of the characteristics of the Bajo communities in the Wakatobi National Marine Park in Buton:

<b>Bajo Community</b>	<b>#Households</b>	<b>Population</b>	<b>General Characteristics</b>
Mola	Approx. 1,000	Est. 6,000	Diverse array of fishing practices, with fishers traveling widely throughout eastern Indonesia. Large component of the population remains highly dependent on reefs, despite collapse of many commercial reef species and significant decline of fish stocks in waters immediately surrounding the villages.
Mantigola	Approx. 200	Est. 800	1 <sup>st</sup> Bajo settlement in the area and still a spiritual base for Bajo peoples in Wakatobi. Fishing still undertaken using traditional boats where families may go on fishing trips to outer reefs for months at a time.
Sampela	Approx. 300	Est. 1,000	Community is mostly dependent on reef resources found locally. Localized overfishing is a problem, although fishers will also make seasonal trips to the outer reefs. Destructive fishing practices are a problem for the community.
Lohoa	Approx. 30	Est. 100	Regarded as an off-shoot of Sampela, with frequent movements between the two communities. There are several fishers operating from Lohoa using destructive practices such as bomb fishing.
Lamangau	Approx. 30	Est. 100	More than any other Bajo community in the Wakatobi National Marine Park, this Bajo village has sought to integrate itself with the local non-Bajo population, with whom they live in close association.

**Phase II Activities to Target Indigenous Peoples.** In the district of Buton, as well as other districts such as Sikka-NTT where the second phase of COREMAP will operate, the program will target many activities specifically to the Bajo peoples and communities. These include:

- Establishing a Bajo Management Team of local Bajo experts to help ensure that program activities in Bajo communities are culturally appropriate (at least one member of this team would likely participate on the district-level Coastal Community Empowerment Board);
- Employ Bajo people as Community Facilitators to Bajo communities if possible; and
- Support a team of respected elders and individuals within each Bajo community to work with the Community Facilitators to implement the objectives of the program in the that community.

### **SPECIAL GUIDELINES FOR LAND AND ASSET DONATIONS**

**Objectives.** The project will not finance any activities that could involuntarily displace people.

#### **1. Land or other assets may be donated through:**

- (a) *Voluntary contributions.* In accordance with traditional practices, villagers may elect to voluntarily contribute land or assets and/or relocate temporarily or permanently from their land without compensation;
- (b) *Contributions against compensation.* A contributor considered "affected" will be eligible for compensation from the village, based on their agreement.

These guidelines provide principles and instructions to compensate affected persons under 1b above, to ensure that all such persons affected, regardless of their land tenure status, will be assisted to improve, or at least to restore, their living standards, income earning or production capacity to pre-project levels.

## 2. Compensation Principles

The LKMD/BPD shall ensure that any of the following means of compensation are provided in a timely way to affected persons (the village grant cannot be used to pay compensation):

- (a) *replacement land with an equally productive plot or other equivalent productive assets;*
- (b) *materials and assistance to replace fully solid structures that will be demolished;*
- (c) *replacement of damaged or lost crops, at market value;*
- (d) *other acceptable in-kind compensation.*

## 3. Consultation Process

The LKMD/BPD will ensure that all occupants of land and owners of assets located in a proposed

- (a) subproject area, are consulted. There will be a village meeting to inform villagers about their rights to compensation and options available in accordance with these Guidelines. The Minutes of the village meeting shall reflect the discussions held, agreements reached, and include the following: *for any voluntary contributions, name of contributor and details about the contribution;*

Summary	Amount of Compensation	Agreement Reached
Land (m2)		
Plots: area affected (m2) houses or other structures to be demolished (units,m2)		
Trees/crops affected		
Other affected assets: list		
Other assets:		

A record of any complaints raised by affected persons must be kept and a map of the disputed area (showing affected areas and replacement areas). The Community Facilitator (CF) shall provide a copy of the Minutes to affected persons and confirm in discussions with each of them their requests and preferences for compensation, agreements reached, and any eventual complaint. Copies will be recorded and submitted to the District PMU via the SETOs and be available for review at supervision.

## 6. Complaints and Grievances

All complaints should first be negotiated to reach an agreement at the village level. If this fails, complaints and grievances about these Guidelines, implementation of the agreements recorded in the Village Minutes or any alleged irregularity in carrying out the project can also be addressed by the affected persons or their representative at the kecamatan level. If this also fails, the complaint may be submitted to the Bupati for a decision.

## 7. Verification

The Village Minutes and evidence of compensation having been made shall be provided to the SETO and to the DPMU assisting the village, supervising engineers, auditors and socio-economic monitors when they undertake reviews under the project.

## Technical Annex 11: Program Processing

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

#### 1. Timetable

Key Milestone	Planned	Actual
PCD Review	December 12, 2002	January 15, 2003
Initial PID to PIC	December 20, 2002	January 21, 2003
Initial ISDS to PIC	December 20, 2002	February 11, 2003
Appraisal	January 28, 2004	February 3, 2004
Negotiations	April 1, 2004	
Board/RVP Approval	May 20, 2004	
Effectiveness	September 1, 2004	
Mid-Term Review	June 30, 2007	
Closing Date	December 31, 2009	

#### 2. Key Institutions & Project Grants

The key institutions involved in preparing this program include: Ministry of Marine Affairs and Fisheries, Indonesian Institute of Sciences, Ministry of Forestry, Police and Navy and 6 District Government preparation teams.

A Japan PHRD grant for US\$740,000 (TF026662) was received and used for project preparation by the recipient to contract consulting services for the following preparation of COREMAP Phase II activities: (a) definition of the project's expected inputs, outputs, and key performance indicators; (b) design of a institutional strengthening component, (c) design of a community based and collaborative management subcomponent, (c) design of a public awareness, education and extension subcomponent, (d) design of 6 district programs; (e) carrying out social and environmental assessments and multiple stakeholder workshops; (f) support for project management, including training for procurement, financial management, (g) the preparation of a Project Implementation Plan. The grant was successfully executed by the Project Implementing Agency. All planned outputs were completed and consultant performance was satisfactory, with significant transfer of technical knowledge to the client. Both the client and stakeholders benefited from training programs and consultative workshops carried out by consultants, as well as gaining experience in program management and administration, the establishment of separate project financial management systems, and international procurement.

The Grant was approved for an extension from October 31, 2003 to December 31, 2003. The main purpose of the extension was to allow use of these funds to assist in the final stages of preparation for COREMAP Phase II and particularly those aspects to support KMK 35, namely the finalization of District Program Plans endorsed by the Bupati and to be approved by the DPRD in each of the six participating districts.

#### 3. Bank Staff & Consultants

STAFF NAME	POSITION	UNIT
Pawan Patil	Task Team Leader	EASRD
Thomas Walton	Safeguards	EASES
John Virdin	Co-Management	ARD
Kathy MacKinnon	Biodiversity	ENV

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Rajiv Sondhi	Financial Management	EACIF
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No.	Position	Name
<b>PHRD Consultant Team</b>		
1.	Preparation Specialist	Mr. Charles Greenwald
2.	CBM Expert	Mr. William Marsden
3.	Economist	Dr. Herman Cesar
4.	Fisheries/MPA Management	Mr. Richard Mounsey
5.	Marine Park Management	Dr. Arthur Mitchell
6.	Social Marketing/Awareness	Ms. Ita Mucharam
7.	Human Resources/Training	Ms. Melody Kemp
8.	CRITC	Mr. Brian Long/Mr. Mohammad Ilyas
9.	AIG Specialist	Dr. Nasruddin Budiman
10.	MCS Expert	Mr. Nursamran Subandi
11.	Institutional Expert	Dr. Abdul Ghofar
12.	Legal Expert	Dr. Roni Titaheluw
13.	Financial Analyst/Costing	Dr. Hamdani Syah
14.	Monitoring & Evaluation	Dr. Zhibin Lin
15.	Extension Specialist	Dr. Soemitro Arintadisastra

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## Technical Annex 13: Statement of Loans and Credits

### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

Project ID	FY	Purpose	Original Amount in US\$ Millions				Difference between expected and actual disbursements <sup>§</sup>		
			IBRD	IDA	GEF	Cancel.	Undisb.	Orig	Frm Rev'd
P059931	2003	ID-Water Resources & Irr.Sector Mgt Prog	45.00	25.00	0.00	0.00	70.09	0.00	0.00
P063913	2003	ID-Java-Bali Pwr Sector & Strength	141.00	0.00	0.00	0.00	141.00	0.00	0.00
P073772	2003	ID-Health Workforce & Services	31.10	74.50	0.00	0.00	108.39	0.00	0.00
P079156	2003	ID Third Kecamatan Development Project	204.30	45.50	0.00	0.00	249.38	0.00	0.00
P076271	2003	ID-PPITA	17.10	0.00	0.00	0.00	17.10	0.00	0.00
P040578	2002	ID-Eastern Indonesia Region Transport	200.00	0.00	0.00	0.00	122.98	13.98	0.00
P072852	2002	ID-URBAN POVERTY II	29.50	70.50	0.00	0.00	102.33	6.52	0.00
P073970	2002	ID-GLOBAL DEV LEARNING (LIL)	2.66	0.00	0.00	0.00	2.13	0.94	0.00
P040528	2001	ID-W. JAVA ENVMT MGMT	11.70	5.75	0.00	0.00	16.16	7.64	0.00
P049539	2001	ID-PROVINCIAL HEALTH II	63.20	40.00	0.00	0.00	102.49	44.19	0.00
P073025	2001	ID-SECOND KECAMATAN DEVELOPMENT PROJ	208.90	111.30	0.00	0.00	301.86	-29.91	0.00
P068949	2001	ID-LIBRARY DEVELOPMENT PROJECT - LIL	0.00	4.15	0.00	0.00	2.93	1.43	0.00
P068051	2001	ID-GEF-W. JAVA ENVMT MGMT	0.00	0.00	2.54	0.00	2.73	4.17	0.00
P059930	2000	ID-DECNT. AGRICULTURAL/FORESTRY EXT	13.00	5.00	0.00	0.00	8.26	3.16	0.00
P059477	2000	ID-WSSLIC II	0.00	77.40	0.00	0.00	67.78	-13.84	0.00
P049545	2000	ID-PROVINCIAL HEALTH I	0.00	38.00	0.00	0.00	24.28	7.90	0.00
P040196	1999	ID-SUMATRA BASIC EDUCUATION	54.50	20.10	0.00	0.00	25.28	18.75	0.00
P041895	1999	ID-SULAWESI BASIC EDUC.	47.90	15.93	0.00	0.00	29.06	27.40	0.00
P063732	1999	ID-CORPORATE RESTRUCTRG	31.50	0.00	0.00	24.50	0.92	25.42	0.60
P064118	1999	ID-WATSAL	300.00	0.00	0.00	0.00	150.00	150.00	150.00
P036049	1999	ID-EARLY CHILD DEVELOPMENT	21.50	0.00	0.00	10.65	3.89	14.41	14.41
P003967	1999	ID-FIFTH HEALTH PROJECT	44.70	0.00	0.00	5.01	13.77	18.76	0.00
P055821	1999	ID-URBAN POVERTY	0.00	100.00	0.00	0.00	21.33	21.79	12.17
P048715	1998	Indonesia - IIDP	34.50	0.00	0.00	8.50	3.72	12.22	3.72
P036956	1998	ID-SAFE MOTHERHOOD	42.50	0.00	0.00	9.15	6.13	15.28	9.28
P036048	1998	ID - CORAL REEF MGM REHAB	6.90	0.00	4.10	0.00	2.46	2.46	2.01
P003993	1998	ID-SUMATRA REG'L RDS	234.00	0.00	0.00	50.00	39.68	73.93	-2.32
P040062	1998	ID - CORAL REEF MGMT REHA	0.00	0.00	4.10	0.00	0.57	0.47	1.59
P040061	1998	ID - BENGKULU REGIONAL DEVELOPMENT	20.50	0.00	0.00	5.00	10.34	15.34	10.34
P039644	1998	ID-W. JAVA BASIC EDUCATION	103.50	0.00	0.00	3.76	16.32	-5.42	0.00
P003700	1997	ID-Solar Home Systems	0.00	0.00	24.30	16.82	0.79	19.84	0.43
P042540	1997	ID-IODINE DEF. CONTROL	28.50	0.00	0.00	9.70	2.90	12.60	10.10
P003987	1997	ID-CENTRAL INDONESIA SEC. EDU.	104.00	0.00	0.00	0.00	15.22	15.22	0.00
P040195	1997	ID-QUALITY OF UNDERGRADUATE EDUC (QUE	71.20	0.00	0.00	9.89	8.83	18.72	8.83
P004026	1997	ID-Railway Efficiency	105.00	0.00	0.00	47.33	27.81	75.13	9.29
P036047	1997	ID-BALI URBAN INFRA.	110.00	0.00	0.00	36.03	14.05	50.08	2.24
P049051	1997	BEPEKA AUDIT MODERNIZATION PROJECT	16.40	0.00	0.00	0.90	6.02	6.92	6.02
P041894	1997	ID-SUMATRA SECONDARY EDUCATION	98.00	0.00	0.00	0.23	8.37	8.59	0.00
P037097	1996	ID-E.JAVA SEC. EDUC.	99.00	0.00	0.00	3.63	12.01	15.65	0.00
<b>Total:</b>			<b>2541.56</b>	<b>633.13</b>	<b>35.04</b>	<b>241.10</b>	<b>1759.35</b>	<b>659.76</b>	<b>238.71</b>

INDONESIA  
STATEMENT OF IFC's  
Held and Disbursed Portfolio  
June 30 - 2003  
In Millions US Dollars

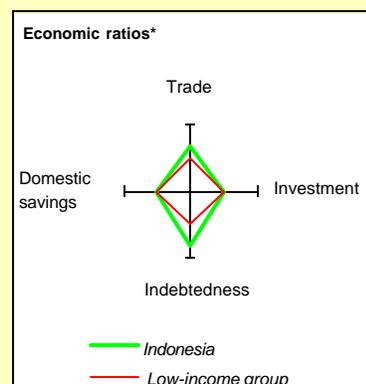
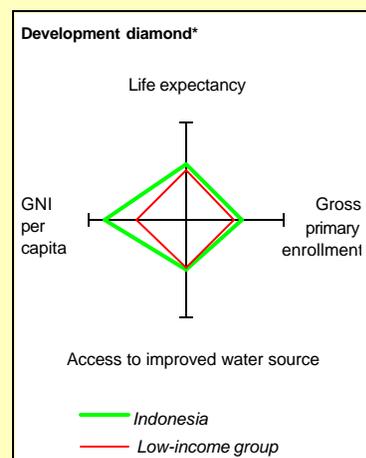
FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1997	PT Sayap	5.83	0.00	0.00	2.00	5.83	0.00	0.00	2.00
2001	PT Sigma	0.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00
1992/95	PT Viscose	17.19	0.00	0.00	17.50	17.19	0.00	0.00	17.50
1997	PT Wings	5.06	0.00	0.00	2.13	5.06	0.00	0.00	2.13
2003	SMM	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	Sunson	12.41	0.00	0.00	7.85	12.41	0.00	0.00	7.85
2003	Verdaine	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1993	PT Samudera	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00
2003	Buana Bank	0.00	15.00	0.00	0.00	0.00	15.00	0.00	0.00
1994	KDLC Bali	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	LYON-MLF-Ibis	2.01	0.00	0.00	2.01	2.01	0.00	0.00	2.01
1985	Manulife	0.00	0.32	0.00	0.00	0.00	0.32	0.00	0.00
2002	P.T. Gawi	11.50	0.00	0.00	10.00	5.35	0.00	0.00	4.65
1997	PT AdeS Alfindo	0.00	6.98	0.00	0.00	0.00	6.98	0.00	0.00
1989	PT Agro Muko	0.00	2.20	0.00	0.00	0.00	2.20	0.00	0.00
1997	PT Alumindo	10.55	0.00	0.00	6.00	10.55	0.00	0.00	6.00
1989/91/94/03	PT Astra	0.00	2.38	0.00	0.00	0.00	2.38	0.00	0.00
0	PT Astra Graphia	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00
	PT Astra Otopart	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	PT BBL Dharmala	11.29	0.00	0.00	21.34	11.29	0.00	0.00	21.34
1993/96	PT Bakrie Pipe	33.24	0.00	0.00	0.00	33.24	0.00	0.00	0.00
1995	PT Bank NISP	0.00	3.59	0.00	0.00	0.00	3.59	0.00	0.00
1997/00/02	PT Berlian	6.77	20.00	0.00	15.48	6.77	16.65	0.00	15.48
1997	PT Grahawita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0/95	PT Indo-Rama	0.00	3.09	0.00	0.00	0.00	3.09	0.00	0.00
	PT KIA Keramik	16.51	0.00	0.00	53.49	16.51	0.00	0.00	53.49
0/90/91/95/99	PT KIA Serpih	15.00	0.00	0.00	49.50	15.00	0.00	0.00	49.50
1992/94/96	PT Kalimantan	20.00	15.00	0.00	3.13	20.00	15.00	0.00	3.13
1995	PT Makro	0.00	1.32	0.00	0.00	0.00	0.79	0.00	0.00
1997	PT Megaplast	5.25	2.50	0.00	0.00	5.25	2.50	0.00	0.00
0/00	PT Nusantara	7.63	0.00	0.00	5.93	7.63	0.00	0.00	5.93
1998	PT Pramindo Ikat	0.00	2.54	0.00	0.00	0.00	2.54	0.00	0.00
0/93									
1996									
	Total Portfolio:	206.24	84.92	0.00	196.36	174.09	81.04	0.00	191.01

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic
2003	PT SPA	0.01	0.00	0.00	0.00
	Total Pending Commitment:	0.01	0.00	0.00	0.00

## Technical Annex 14: Country At A Glance

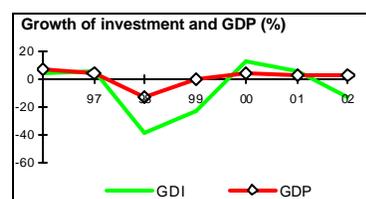
### INDONESIA: Coral Reef Rehabilitation & Management Project (Phase II)

POVERTY and SOCIAL	Indonesia	East Asia & Pacific	Low-income		
<b>2002</b>					
Population, mid-year (millions)	211.7	1,838	2,495		
GNI per capita (Atlas method, US\$)	710	950	430		
GNI (Atlas method, US\$ billions)	149.9	1.740	1.072		
<b>Average annual growth, 1996-02</b>					
Population (%)	1.3	1.0	1.9		
Labor force (%)	2.2	1.2	2.3		
<b>Most recent estimate (latest year available, 1996-02)</b>					
Poverty (% of population below national poverty line)	16	..	..		
Urban population (% of total population)	43	38	30		
Life expectancy at birth (years)	67	69	59		
Infant mortality (per 1,000 live births)	34	33	81		
Child malnutrition (% of children under 5)	25	15	..		
Access to an improved water source (% of population)	78	76	76		
Illiteracy (% of population age 15+)	12	13	37		
Gross primary enrollment (% of school-age population)	110	106	95		
Male	111	105	103		
Female	109	106	87		
<b>KEY ECONOMIC RATIOS and LONG-TERM TRENDS</b>					
	1982	1992	2001	2002	
GDP (US\$ billions)	94.7	139.1	141.3	172.9	
Gross domestic investment/GDP <sup>1</sup>	27.8	30.5	21.8	20.2	
Exports of goods and services/GDP	25.3	27.9	42.3	35.4	
Gross domestic savings/GDP	29.0	33.4	24.9	21.1	
Gross national savings/GDP	..	21.4	22.8	17.1	
Current account balance/GDP	-5.6	-2.0	4.9	4.3	
Interest payments/GDP	1.6	2.7	3.2	1.8	
Total debt/GDP	26.5	63.3	94.2	74.5	
Total debt service/exports	18.1	32.6	25.9	23.7	
Present value of debt/GDP	..	..	93.0	..	
Present value of debt/exports	..	..	235.5	..	
	1982-92	1992-02	2001	2002	2003-07
(average annual growth)					
GDP	6.9	2.5	3.4	3.7	3.9
GDP per capita	5.0	1.1	2.1	2.3	2.4

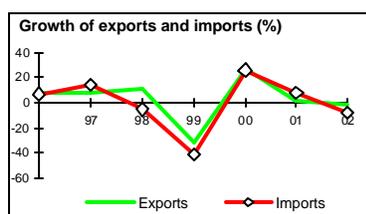


#### STRUCTURE of the ECONOMY

	1982	1992	2001	2002
<i>(% of GDP)</i>				
Agriculture	23.9	18.7	17.0	17.5
Industry	37.9	39.6	45.6	44.5
Manufacturing	11.9	22.0	25.0	25.0
Services	38.2	41.7	37.5	38.1
Private consumption	59.5	57.8	67.3	70.7
General government consumption	11.5	8.8	7.8	8.2
Imports of goods and services	24.1	25.0	34.9	28.5



	1982-92	1992-02	2001	2002
<i>(average annual growth)</i>				
Agriculture	3.8	1.6	1.0	1.7
Industry	9.2	3.2	3.3	3.7
Manufacturing	12.6	4.7	4.1	4.0
Services	6.5	2.3	4.6	4.4
Private consumption	4.4	5.2	4.4	4.7
General government consumption	4.9	0.4	9.0	12.8
Gross domestic investment	9.6	-4.7	6.3	-12.5
Imports of goods and services	3.0	1.9	8.1	-8.3



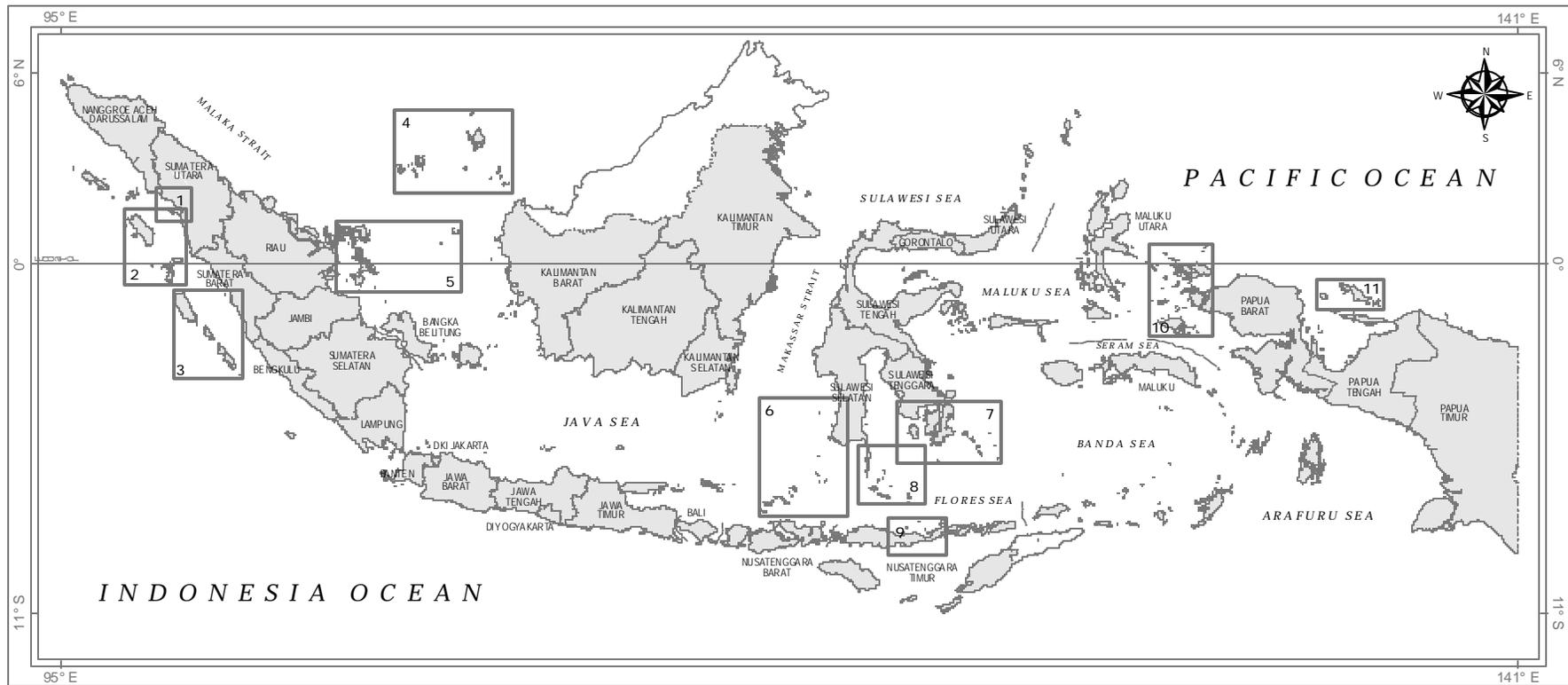
\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

# Technical Annex 15: MAPS COREMAP Phase II



Map 1

# COREMAP AREAS IN INDONESIA



Scale 1 : 20.000.000



### LEGEND

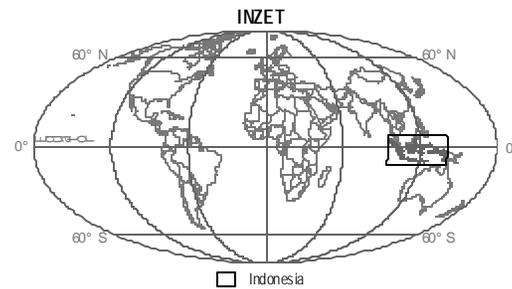
-  Coremap Area
-  Land
-  Country Boundary
-  Province Boundary
-  Coastline

### Western Indonesia

- 1 District of Tapanuli Tengah
- 2 District of Nias
- 3 District of Kepulauan Mentawai
- 4 District of Natuna
- 5 District of Batam and Kepulauan Riau

### Eastern Indonesia

- 6 District of Pangkajene Kepulauan
- 7 District of Buton
- 8 District of Selayar
- 9 District of Sikka
- 10 District of Raja Ampat
- 11 District of Biak Numfor



**COREMAP**

