



Report and Recommendation of the President to the Board of Directors

Project Number: 46421
November 2013

Proposed Loan and Administration of Grant Republic of Indonesia: Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative Project

CURRENCY EQUIVALENTS

(as of 12 November 2013)

Currency unit – rupiah (Rp)

Rp1.00 = \$0.000088

\$1.00 = Rp11,396

ABBREVIATIONS

ADB	–	Asian Development Bank
CDD	–	community-driven development
COREMAP	–	Coral Reef Rehabilitation and Management Program
CTI	–	Coral Triangle Initiative
EAFM	–	ecosystem approach to fisheries management
EIRR	–	economic internal rate of return
GEF	–	Global Environment Facility
IPPF	–	indigenous peoples planning framework
LARF	–	land acquisition and resettlement framework
LIPI	–	Lembaga Ilmu Pengetahuan Indonesia (Indonesian Institute of Sciences)
MMAF	–	Ministry of Marine Affairs and Fisheries
MPA	–	marine protected area
PMO	–	project management office

NOTE

In this report, “\$” refers to US dollars

Vice-President	S. Groff, Operations 2
Director General	J. Nugent, Southeast Asia Department (SERD)
Director	J.H. Mir, Environment, Natural Resources and Agriculture Division, SERD
Team leader	M.N. Islam, Water Resources Specialist, SERD
Team members	I. Ahsan, Counsel, Office of the General Counsel
	S. Aman-Wooster, Senior Social Development Specialist (Safeguards), SERD
	S. Ancha, Principal Climate Change Specialist, SERD
	T. Dang, Young Professional (Environment), SERD
	B. Giap, Natural Resources and Agriculture Economist, SERD
	U. Hoque, Senior Social Development Specialist (Gender and Development), SERD
	M. Ladia, Associate Safeguards Officer (Resettlement), SERD
	N. Mardiniah, Safeguards Officer (Resettlement), SERD
	A. Musa, Financial Management Specialist, SERD
	E. Quincieu, Water Resources Specialist, SERD
	P. Ramachandran, Senior Environment Specialist, SERD
	L. Reksoatmodjo, Financial Control Officer, SERD
	K. Ryu, Unit Head, Project Administration, SERD
	O. Suyatmo, Procurement Officer, SERD
	S. Teoh, Natural Resources Specialist, SERD
	P. Wardani, Senior Project Officer, SERD
Peer reviewer	M. Ahmed, Principal Climate Change Specialist, South Asia Department

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PROJECT AT A GLANCE

1. Project Name: Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative Project		2. Project Number: 46421-001	
3. Country: Indonesia		4. Department/Division: Southeast Asia Department/Environment, Natural Resources & Agriculture Division	
5. Sector Classification:			
		Sectors Agriculture and natural resources	Primary √
		Subsectors Water-based natural resources management	
6. Thematic Classification:			
		Themes Economic growth	Primary
		Environmental sustainability	√
		Capacity development	
		Subthemes Widening access to markets and economic opportunities	
		Natural resources conservation	
		Institutional development	
6a. Climate Change Impact		6b. Gender Mainstreaming	
Adaptation	High	Gender equity theme (GEN)	
Mitigation	Low	Effective gender mainstreaming (EGM) √	
		Some gender elements (SGE)	
		No gender elements (NGE)	
7. Targeting Classification:		8. Location Impact:	
General Intervention	Targeted Intervention		
	Geographic dimensions of inclusive growth	Millennium development goals	Income poverty at household level
√			
		Rural High	
		Urban Low	
9. Project Risk Categorization: Low			
10. Safeguards Categorization:			
		Environment	B
		Involuntary resettlement	B
		Indigenous peoples	B
11. ADB Financing:			
	Sovereign/Nonsovereign	Modality	Source
	Sovereign	Project loan	Ordinary capital resources
	Total		45.52
		45.52	
12. Cofinancing:			
	Financier	Category	Amount (\$ Million)
	Global Environment Facility	Official-Grant	8.00
	Total		8.00
13. Counterpart Financing:			
	Source	Amount (\$ Million)	
	Government	13.14	
	Total	13.14	
14. Aid Effectiveness:			
Parallel project implementation unit		No	
Program-based approach		No	

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan and (ii) proposed administration of a grant to be provided by the Global Environment Facility (GEF), both to the Republic of Indonesia for the Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative Project (COREMAP—CTI).¹

2. The project will enable coastal communities, and the institutions that support them, to manage coral reef resources, associated ecosystems, and biodiversity in a sustainable manner for increasing the economic and social welfare of coastal communities. The COREMAP—CTI will support the government's sector development plan and national targets for establishing effective marine protected areas (MPAs).² Project implementation will focus on improving the management, sustainability, and resilience of MPAs. The project area comprises seven district MPAs located in Bintan, Batam, Lingga, and Natuna districts in Kepulauan Riau province; Central Tapanuli and North Nias districts in North Sumatra province; Mentawai district in West Sumatra province; and three national MPAs, namely, Anambas in Anambas district, Kepulauan Riau province; Pulau Pieh in Pariaman district, West Sumatra province; and Gilimatra in North Lombok district, West Nusa Tenggara province.³

II. THE PROJECT

A. Rationale

3. Indonesia is the world's largest archipelagic nation, with 18% of the world's coral reefs that host diverse marine flora and fauna.⁴ Indonesia's coastal ecosystems serve as an important base for the country's economic growth. Sustainable management of the coral reef ecosystem is therefore a major objective of Indonesia's marine and fisheries sector development plan, which is guided by (i) the National Long-Term Development Plan, 2005–2025, (ii) the Medium-Term Development Plan, 2010–2014, and (iii) the Ministry of Marine Affairs and Fisheries (MMAF) Strategic Plan, 2010–2014.⁵ The government has policies to address sector issues relating to coastal and marine resource management.⁶ Collectively, these policies and plans articulate the government's priorities for the sector and comprise the sector development plan. Indonesia has also played a central role in the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security, a six-country program of regional cooperation to sustainably manage coastal and marine resources in the region.⁷

¹ The design and monitoring framework is in Appendix 1.

² Sector Assessment (Summary): Agriculture, Natural Resources and Environment (Marine and Fishery Subsector) (accessible from the list of linked documents in Appendix 2).

³ The Asian Development Bank (ADB) provided project preparatory technical assistance. ADB. 2011. *Technical Assistance for Coastal and Marine Resources Management in the Coral Triangle-Southeast Asia*. Manila.

⁴ L. Burke et al. 2002. *Reefs at Risk in Southeast Asia*. Washington, DC: World Resources Institute.

⁵ Government of Indonesia. 2007. *National Long-Term Development Plan of 2005–2025 or Rencana Pembangunan Jangka Panjang (RPJP)*. Jakarta. Government of Indonesia. 2010. *National Medium-Term Development Plan (RPJMN) 2010–2014*. Jakarta. Indonesia Ministry of Marine Affairs and Fisheries. 2010. *Strategic Plan, 2010–2014*. Jakarta.

⁶ Sector and Institutional Analysis (accessible from the list of linked documents in Appendix 2).

⁷ This is a multilateral partnership among the governments of Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands, and Timor-Leste. At the First Ministerial Meeting in 2009, these governments agreed to adopt a 10-year CTI Regional Plan of Action to safeguard the region's marine and coastal biological resources. One of the CTI goals is to establish a fully functioning and effectively managed region-wide Coral Triangle Marine Protected Area System. <http://www.coraltriangleinitiative.org/>

4. Low awareness of coastal communities on coral reef conservation, inadequate institutional capacity to contain land- and marine-based pollution, insufficient institutional frameworks and capacity to effectively manage MPAs, and persistent poverty in coastal areas have resulted in degradation of about 70% of Indonesia's coral reef ecosystem.⁸ To address these root causes, the Government of Indonesia has adopted a multifaceted approach focusing on (i) institutional capacity building, (ii) development of models for establishment and effective management of MPAs, and (iii) reduction of coastal poverty through income-generating infrastructure and sustainable livelihoods. This project represents the last of a three-phase program in which the Asian Development Bank (ADB) and the World Bank are working in close cooperation with the government in complementary geographic areas.⁹ The first phase (COREMAP I) established a viable framework for a national coral reef management system in Indonesia.¹⁰ The second phase (COREMAP II) consolidated the knowledge base, adopted a community-based approach for decentralized coral reef management, and built strong public awareness on coral reef conservation.¹¹ COREMAP II initiated institutional development for model MPA systems and tested the feasibility of sustainable livelihood activities for reducing fishing pressures in targeted coastal communities. ADB and the World Bank project completion reports for COREMAP II described several lessons that have been incorporated in the COREMAP—CTI project design. These include the need for (i) commitment and support from local government bodies, (ii) integration of value chain analysis of livelihood activities in the project design, and (iii) effective mainstreaming of gender concerns.

5. The project will contribute to meeting the government's marine and fisheries sector development plan's overall targets to establish 20.0 million hectares of effective MPAs by 2020 (of which 15.7 million hectares were established by 2012) and to effectively manage 15 threatened, endangered, and endemic species. This consolidation phase will develop model MPAs with effective management, financial sustainability, capacity for community co-management, and enforcement of regulations. The project will also create models of sustainable microenterprise models for communities. The project is aligned with Indonesia's country partnership strategy, 2012–2014 with regard to its two strategic pillars of inclusive growth and environmental sustainability. The project is also aligned with Indonesia's National Plan of Action for the CTI¹² and ADB's package of technical assistance support to implement this plan.¹³

6. Climate change-induced ocean temperature increase, sea level rise, and ocean acidification have adverse impacts on coral reef ecosystems and biodiversity. MPAs, as carbon sinks, mitigate climate change by protecting and enhancing habitats such as coral reefs, mangroves, and sea grasses. Several project locations have seen climate change-induced temperature rise impacting coral reefs through coral bleaching. The project's focus on effective MPA management, support for integrated coastal zone management, sustainable livelihoods, and public awareness activities will enhance resilience of coral reef ecosystems and contribute to adaptive capacity of target coastal communities to climate change impacts. Effective

⁸ Indonesia National Coordinating Committee Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security. 2012. *The State of the Coral Triangle in Indonesia*. Jakarta.

⁹ Development Coordination (accessible from the list of linked documents in Appendix 2).

¹⁰ ADB. 1998. *Report and Recommendation of the President to the Board of Directors: Proposed Technical Assistance Loan and Grant to the Republic of Indonesia for the Coral Reef Rehabilitation and Management Project*. Manila.

¹¹ ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Indonesia for the Coral Reef Rehabilitation and Management Project Phase II*. Manila.

¹² Coral Triangle Initiative. <http://www.coraltriangleinitiative.org/library/national-plan-action-indonesia>

¹³ ADB. 2011. *Technical Assistance for Coastal and Marine Resources Management in the Coral Triangle-Southeast Asia*. Manila.

management of MPAs will protect coral reef ecosystems and enhance carbon sequestration.¹⁴

B. Impact and Outcome

7. The impact will be the sustainable management of coral reef ecosystems in the project area. The outcome will be the enhanced capacity to manage coral reef ecosystems inside and outside target MPAs.

8. The project will be implemented in the seven district MPAs located in existing COREMAP II areas and three national MPAs in three new districts (para. 2) that include at least 57 project villages. These 10 MPAs will serve as models for effective management, for potential replication and/or scaling up across 100 or more demarcated MPAs.

C. Outputs

9. The project will have four outputs.¹⁵

- (i) **Coral reef management and institutions strengthened.** This will strengthen capacity developed under COREMAP II and institutionalize community-based coral reef management initiatives within existing government legal systems and institutions by (a) incorporating roles and responsibilities of *lembaga pengelola sumberdaya terumbu karang* (community coral reef resource management institutions) in village administrative structures through regulations; (b) upgrading information centers established under COREMAP II into resource centers; (c) providing support and mentoring by MMAF extension workers to district-level implementing agencies' staff to mainstream a community coral reef management approach; (d) establishing learning networks of fishing communities, MPA managers, and local government officials to learn from each other and adopt best practices; (e) conducting socioeconomic and ecological surveys by the Indonesian Institute of Sciences (LIPI); (f) developing a decentralized certification program by LIPI for ecological benefit monitoring; (g) upgrading the coral reef management information system to include web-based user data access and reporting; (h) conducting teacher training on local content curriculum; (i) providing a postgraduate program for Directorate General of Capture Fisheries staff to develop sustainable fisheries management expertise; (j) strengthening MPA surveillance by providing equipment, infrastructure, policies, monitoring, control, and joint patrols (inter-agency and community surveillance groups); and (k) conducting training on conservation, coastal management, ecosystem approach to fisheries management (EAFM), ecosystem monitoring, and data management.
- (ii) **Ecosystem-based resource management developed.** This output will strengthen MPA management effectiveness and biodiversity conservation. Specific activities are: (a) develop district-level coastal and marine spatial plans; (b) improve MPA effectiveness including approval of MPA boundaries, MPA boards, zoning and management plans and provide MPA goods and equipment; (c) provide integrated coastal zone management training, including climate change adaptation; (d) assess coral reef fish stock and develop management

¹⁴ Project Contribution to Climate Change Adaptation and Mitigation in Marine Protected Areas (accessible from the list of linked documents in Appendix 2).

¹⁵ Further details of activities to be financed by the ADB loan and GEF grant are given in the design and monitoring framework (Appendix 1).

plans for selected coral reef fish, based on EAFM, at government's specified fisheries management area; (e) assess district fisheries management performance using EAFM indicators and provide training on EAFM; (f) develop and implement management plans for six threatened species; (g) pilot ecosystem valuation methodology, strengthen MPA financial management capacity, mainstream biodiversity considerations in policies and plans, and pilot payment for ecosystem services schemes; and (h) conduct studies and surveys to support sustainable fishing regulations, ecosystem approaches to fisheries management, and MPA networks.

- (iii) **Sustainable marine-based livelihoods improved.** This output will build infrastructure to support sustainable livelihoods and income-generating activities by (a) developing sustainable ecosystem-based coastal and marine enterprises with value chains linked to markets; (b) providing basic infrastructure and equipment to MPA management boards and communities for improved income generation, MPA management, and social welfare through public-private partnerships; (c) developing community model enterprises to support sustainable livelihoods, including assistance for feasibility studies and analysis of complete value chains; and (d) training district enterprise staff, community microenterprises, and their beneficiaries on business and sustainable livelihoods and pilot certification regimens.
- (iv) **Project management.** This output will manage and implement project activities, and also institutionalize national coral reef management arrangements. The project management office (PMO) will coordinate and monitor project activities, implement the project performance monitoring system, conduct project evaluation surveys, and prepare quarterly, annual, midterm, and project completion reports.

10. The project is designed as a sector project, with an integrated focus on the government's sector development policies and plans and the adequacy of institutions to formulate and manage these plans.¹⁶ The selection of subprojects within this sector modality will be based on detailed technical, financial, economic, social, and environmental criteria that have been agreed with the government in the project administration manual.¹⁷ Key criteria require that the subproject (i) contributes directly to environmentally sound resource utilization across MPAs, (ii) supports development of sustainable fisheries, (iii) contributes to fostering sustainable livelihoods that reduce fishing pressure or provide nontraditional gainful employment within the sector, and (iv) enhances effectiveness, governance, and financial sustainability of MPAs.

11. Subprojects will be formulated and implemented using an embedded community-driven development (CDD) approach.¹⁸ Subproject design and development will follow a participatory planning and demand-driven approach towards identifying a package of investments and activities. The project will support the process of drafting the operational management plans for the MPAs, which will be developed and validated through participatory processes. Innovative financing mechanisms, such as payment for ecosystem services, will be piloted.

12. Experience from COREMAP II showed that some livelihood enterprises were unsuccessful and unsustainable due to insufficient institutional and technical support mechanisms as well as market connectivity. Value chain analysis, including a study of input and

¹⁶ The borrowing developing member country has a sector development plan to meet the priority development needs of the sector and has the institutional capacity to implement the sector development plan. Policies applicable to the sector are appropriate and will be improved, if warranted.

¹⁷ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

¹⁸ Subproject is defined as an integrated package of investments and activities in a given MPA.

output markets, will be undertaken during preparation of each subproject. This will enable specification of the public infrastructure investment and associated technology, management, operational support, and training required. The actual mix of sustainable livelihood activities, including women-led microenterprises, will be finalized during implementation using CDD good practices.

13. Based on the agreed criteria, two representative subprojects were identified and appraised during project preparation, one for a national-level MPA (Anambas) and one for a district-level MPA (Bintan). These subprojects include (i) enabling infrastructure for private sector participation in ecotourism development, (ii) fisheries productivity-related infrastructure, (iii) sustainable livelihood-related infrastructure, and (iv) MPA governance.¹⁹ Specific representative subproject interventions were identified based on consultations with communities, district governments, the private sector, and civil society.

D. Investment and Financing Plans

14. The project is estimated to cost \$66.66 million (Table 1). Detailed cost estimates are included in the project administration manual (footnote 17).

Table 1: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Coral reef management and institutions strengthened	16.76
2. Ecosystem-based resource management developed	14.95
3. Sustainable marine-based livelihoods improved	22.16
4. Project management	10.63
Subtotal (A)	64.50
B. Financing Charges During Implementation^c	2.16
Total (A+B)	66.66

^a Includes taxes and duties of \$5.62 million to be financed from government resources.

^b In mid-2013 prices.

^c Includes interest and commitment charges. Interest during implementation for the ADB loans has been computed at the prevailing London interbank 5-year swap rate plus a spread of 0.40% per year. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: ADB estimates.

15. The government has requested a loan of \$45.52 million from ADB's ordinary capital resources to help finance the project. The loan will have an 18-year term, including a grace period of 6 years, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan agreement. The financing plan is in Table 2.

16. GEF grant cofinancing of \$8 million has been committed. This grant to the government will be administered by ADB and implemented by the executing agency in accordance with such terms and conditions set forth in the draft GEF grant agreement. The grant will ensure the sustainability of nationally and globally important biodiversity through management and zoning plans of MPAs and institutionalizing ecosystem monitoring within MPAs according to international best practice. Direct financial support will be provided to MPAs for resource surveys and valuation, reef health, biodiversity and ecosystem management, monitoring, and

¹⁹ Subproject Appraisal for Anambas and Bintan (accessible from the list of linked documents in Appendix 2).

surveillance. GEF will also finance training and technical support to communities with a focus on the establishment of environmentally friendly, small-scale microenterprises.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (loan)	45.52	68
Global Environment Facility (grant)	8.00	12
Government	13.14 ^a	20
Total	66.66	100

^a Includes taxes and duties of \$5.62 million and financing charges during implementation of \$2.16 million.
Source: ADB estimates.

E. Implementation Arrangements

17. The project will be implemented over a period of 5 years. Table 3 summarizes the implementation arrangements; details are in the project administration manual (footnote 17). District and municipal governments, through district implementing units, will support national-level implementing agencies. Village-level activities will be carried out by *lembaga pengelola sumberdaya terumbu karang* and *pokmas* (community groups).

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	January 2014–December 2018		
Estimated completion date	31 December 2018 (completion) 30 June 2019 (loan and GEF grant closing)		
Management			
(i) Oversight body	National Steering Committee National Development Planning Agency (chair) MMAF, LIPI, Ministry of Finance, Ministry of Home Affairs (members)		
(ii) Executing agency	Directorate General of Marine, Coasts and Small Islands, MMAF		
(iii) Key implementing agencies	Directorate General of Marine, Coasts and Small Islands-Directorate of Area and Fish Species Conservation; LIPI-Research Center for Oceanography; Directorate General Capture Fisheries-Directorate of Fisheries Resources		
Procurement	National competitive bidding and/or shopping	Multiple contracts	\$15.06 million
	Community participation	Support for sustainable livelihoods and surveys	\$2.14 million
Consulting services	Quality- and cost-based selection	1,074 person-months	\$5.21 million
	Consultants qualification selection	Survey studies and services	\$1.52 million
	Individual consultant selection	62 person-months national	\$0.11 million
Advance contracting	Recruitment of project management consultants		
Disbursement	The loan and GEF grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, GEF = Global Environment Facility, LIPI = Lembaga Ilmu Pengetahuan Indonesia (Indonesian Institute of Sciences), MMAF = Ministry of Marine Affairs and Fisheries.

Source: ADB loan fact-finding memorandum of understanding.

III. DUE DILIGENCE

A. Technical

18. The formulation of subprojects for MPAs will follow a CDD approach and consultations with local communities to ensure that (i) infrastructure and equipment to be provided under the project are adapted to local conditions, and (ii) there is local capacity to implement, operate, and maintain the infrastructure and equipment.

B. Economic and Financial

19. The project will support sustainable economic utilization of coastal and marine resources in the selected MPAs by fostering CDD. Within MPAs, coral reefs and mangroves provide significant potential for direct economic benefits from commercial fisheries, ecotourism, and microenterprise development. They also provide combined economic and environmental benefits from the prevention of coastal erosion. MPA management effectiveness will be realized through long-term sustainability of MPA resources by providing coastal communities with opportunities for conservation-based financial gain from coral reef and mangrove resources.

20. An economic analysis has been undertaken of two sample MPAs to determine the viability of establishing effective MPA management to support a range of economic activities. The benefits have been estimated based on economic values of coral reef and mangrove resources in terms of fisheries potential and erosion prevention, as well as the potential for ecotourism development based on the contribution of tourism to gross regional domestic product. The economic internal rate of return (EIRR) is estimated at 15.3% for the national MPA (Anambas) and 42.1% for the district MPA (Bintan). The higher EIRR of Bintan reflects its larger and more valuable coral reef and mangrove areas than those in Anambas. A sensitivity analysis indicates that EIRRs are highly robust in both MPAs with respect to potentially adverse movements in key benefit and cost streams.²⁰

21. To reflect the financial benefits of the project to coastal communities that are dependent upon resources inside MPAs, a financial analysis has been undertaken of a range of microenterprise aquaculture investments that could be supported under the project, subject to satisfying selection criteria and detailed market and financial analyses. Financial internal rates of return range from 17% to over 50%. The project will enhance sustainability of aquaculture investments through effective microenterprise appraisal and by supporting complementary value chain investments to ensure adequate supply of quality inputs and access to market outlets.

C. Governance

22. Indonesia's public expenditure financial accountability assessment (2007) indicates that Indonesia has made significant improvements in the way its public finances are managed and in increasing transparency and independent oversight.²¹ A sound regulatory framework is now in place in almost all areas of public financial management. Key strengths pertain to transparent and comprehensive budget documentation, a well-defined budget process with both executive and legislative branches adhering to schedules, a classification that complies with international standards, and a strengthened external audit function. New public financial management laws

²⁰ Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

²¹ World Bank. 2007. *Indonesia Public Expenditure and Financial Accountability: Public Financial Management and Performance Report and Performance Indicators*. Washington, DC.

articulate roles for Indonesia's Parliament, the government (through the Ministry of Finance), and spending agencies. Weaknesses were identified across various dimensions of budget execution, such as financial reporting and internal controls. ADB and the government have been working in partnership to strengthen areas of improvement identified in the PEFA report.

23. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and MMAF. The specific policy requirements and supplementary measures are described in the project administration manual (footnote 17).

D. Poverty and Social

24. The project will support employment creation, livelihood development, and improvement of marine ecosystem and resource conditions, and will contribute to poverty reduction efforts of the government. The primary beneficiaries of the project will be coastal communities in selected MPAs. Villagers in the project area, especially *masyarakat adat* (communities governed by customs), small fisher folk, and workers in the fishing industry, are highly dependent on coastal and marine resources for their livelihoods. The project will support at least 2,000 households to help increase their incomes by developing sustainable livelihoods through marine-based enterprises. Within 6 years after project completion, household incomes are expected to increase by 10% to 15%. By focusing on business and vocational skill training, and by providing market linkages and technical assistance, the project will empower small entrepreneurs and provide them with relevant experience. Learning networks and microenterprise models will help replication in other villages and districts. The country's economic indicators, a summary poverty reduction and social strategy, and a gender action plan are available in linked documents.²²

25. Local communities and institutions will be strengthened to co-manage and promote coral reef conservation through MPA management institutions. The project will strengthen capacities of stakeholders for decentralized co-management of MPAs through a CDD approach. Communities will have a role in selection of subproject activities within defined selection criteria, and will participate in development of coral reef management plans and policies.²³ Communities will also be involved in planning, design, implementation, and monitoring of (i) small-scale infrastructure through a community contracting process; (ii) sustainable livelihood development by taking a lead role in its development, promotion, and implementation; and (iii) biodiversity management in partnership with nongovernment organizations and the private sector.

26. **Gender and development.** The project is classified as effective gender mainstreaming as it is designed to benefit women by (i) increasing their participation and decision-making in natural resource management at community and local government levels, and (ii) providing them with improved access to services. The project will facilitate women's active participation in setting up, operating, and managing small-scale income-generating projects. The PMO will ensure that strengthening of *pokmas* will provide equitable opportunities for women's membership and representation, and opportunities for them to take decision-making functions. Technical and life skills training will be provided according to women's needs and aspirations, including establishing and strengthening women's groups and community mentoring programs. At least 30% of participants in marine-based livelihood training are targeted to be women.

²² Country Economic Indicators, Summary Poverty Reduction and Social Strategy, and Gender Action Plan (accessible from the list of linked documents in Appendix 2).

²³ Examples are integrated coastal zone management, MPA management and zoning plans, and sustainable fisheries regulations.

E. Safeguards

27. **Environment (category B).** The project will undertake small-scale activities like (i) infrastructure to support MPA operations; (ii) ecotourism; and (iii) livelihood activities that cause minimal potential disturbances to the environment. These can be easily mitigated with proper site selection, environmentally friendly construction technology, best practices to minimize pollution during construction, and proper waste disposal. An environmental assessment and review framework has been prepared and will guide environmental screening and categorization of project interventions and identify potential impacts and mitigating measures.²⁴ Two sample subproject initial environment examinations were prepared and analyzed to provide prototypes for identifying typical impacts of potential interventions. The environmental assessment and review framework and the two sample subproject initial environmental examinations were endorsed by the government and disclosed on ADB's website.

28. **Involuntary resettlement (category B).** Screening of socioeconomic infrastructure will eliminate subprojects with significant land acquisition or resettlement impacts. A land acquisition and resettlement framework (LARF) has been prepared, endorsed by the government, and disclosed on ADB's website.²⁵ Given the project's CDD approach, infrastructure will be selected after project approval. A resettlement plan will then be prepared for each subproject, in line with the LARF and in consultation with and disclosed to affected persons. The LARF provides for transparent procedures and record-keeping for land donation and transactions involving willing buyer and willing seller. It also includes a well-defined consultation mechanism, an entitlement matrix, and a grievance redress mechanism. The MMAF has dedicated staff to implement social and environment safeguards. The MMAF's project safeguards staff, supported by consultants, will implement the LARF, including preparation of resettlement plans. Project implementers will be trained to operationalize the LARF consistent with government policies on involuntary resettlement.

29. **Indigenous people (category B).** Six *masyarakat adat* were identified in the project area. In Mentawai district, indigenous peoples are leaders of local government, but in other districts they are not dominant. Overall, indigenous peoples' concerns on cultural integrity and livelihoods are built into project design using a CDD approach, resulting in positive impacts. An indigenous peoples planning framework (IPPF) has been prepared, reflecting the requirements of ADB's safeguard policies, which has been endorsed by the government and disclosed on ADB's website.²⁶ The IPPF will screen potential negative impacts, outline a strategy for beneficial measures for indigenous peoples, and guide preparation of subproject indigenous peoples plans. These plans will be prepared after project approval, in consultation with and disclosed to indigenous peoples communities. The government has agreed to allocate adequate resources to implement the IPPF and safeguard the rights of indigenous peoples, including allocating 2% of the livelihoods budget for indigenous peoples' community activities. The PMO will have full-time, qualified and experienced staff, supported by nongovernment organizations and consulting firms with a local presence and/or partnerships (if required) to ensure that plans are diligently implemented. Project implementers will be trained in operationalizing the IPPF.

²⁴ Environmental Assessment and Review Framework (accessible from the list of linked documents in Appendix 2).

²⁵ Land Acquisition and Resettlement Framework (accessible from the list of linked documents in Appendix 2).

²⁶ Indigenous Peoples Planning Framework (accessible from the list of linked documents in Appendix 2).

F. Risks and Mitigating Measures

30. The integrated benefits and positive impacts of the project are expected to outweigh the costs. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.²⁷

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Geographical spread of project area may make decentralized project management difficult	District advisors will coordinate field activities with national and provincial oversight, and the MMAF field offices in Sumatra will manage the national MPAs.
Inadequate enforcement of coastal and marine regulations	Joint patrols by communities, police, and navy will support enforcement of regulations.
Weak capacity of procurement staff in district and national field technical implementation offices	Regular procurement training at district and technical implementing unit levels will be provided by project management office supported by project implementation consultants.
Inadequate internal controls for fund flow to end users	ADB will coordinate with the executing agency and government's internal control institution initiatives to improve internal controls.

MMAF = Ministry of Marine Affairs and Fisheries, MPA = marine protected area.

Source: Asian Development Bank.

IV. ASSURANCES

31. The government and the MMAF have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and loan and grant documents.

32. The government and the MMAF have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement and the grant agreement.

V. RECOMMENDATION

33. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the loan of \$45,520,000 to the Republic of Indonesia for the Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative Project, from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 18 years, including a grace period of 6 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board; and
- (ii) the administration by ADB of a grant not exceeding the equivalent of \$8,000,000 to the Republic of Indonesia for the Coral Reef Rehabilitation and Management Program—Coral Triangle Initiative Project, to be provided by the Global Environment Facility.

Takehiko Nakao
President

21 November 2013

²⁷ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact</p> <p>Sustainable management of coral reef ecosystems in the project area</p>	<p>By 2024:</p> <p>Live coral cover increases or remains stable in project area (baseline in 2010: Bintan, 65%; Natuna, 51%; Tapanulli Tengah, 44%; Nias, 28%; Batam, 60%; baseline in 2011: Mentawai, 25%) (baselines for national MPAs will be established in 2014)^a</p> <p>Stocks of Napoleon wrasse in Anambas reach a stable population (baseline stock assessments to be established in 2014)^a</p> <p>Household incomes of project beneficiaries increase by 10%–15% (baseline household income of beneficiaries at project sites to be established in 2014)^a</p>	<p>Ecological surveys of coral reef information and training center</p> <p>MMAF, Ministry of Environment, and State of the Coral Triangle reports Napoleon wrasse juvenile stocks will be assessed over time.</p> <p>Coral reef information and training center marine resource assessment for Anambas</p> <p>Government's annual statistical publication</p>	<p>Assumption</p> <p>Government and community support exists for MPA model replication</p> <p>Risks</p> <p>Impacts of climate change reduce the benefits of project outputs</p> <p>Natural events (e.g., earthquake, tsunami, bleaching) adversely impact coral ecosystems</p>
<p>Outcome</p> <p>Enhanced capacity to manage coral reef ecosystems inside and outside target MPAs</p>	<p>By 2018:</p> <p>MPA management effectiveness for 2.75 million hectares increased by at least one level based on the government's MPA effectiveness criteria (baseline in 2013: red and yellow; target: green to blue)</p> <p>MPA operational management plans with business and financing strategies approved and implementation initiated in 10 MPAs (baseline in 2013: 0; target in 2018: 10)</p>	<p>MMAF, Ministry of Environment, and State of the Coral Triangle reports</p> <p>MPA managers' effectiveness score card assessment</p> <p>GEF biodiversity tracking tools for MPAs</p>	<p>Assumptions</p> <p>Strong collaboration exists amongst stakeholders</p> <p>High quality human resources are available</p> <p>Risk</p> <p>Insufficient political will at the local level</p>
<p>Outputs</p> <p>1. Coral reef management and institutions strengthened</p>	<p>By 2018:</p> <p>20 community development extension workers (with gender proportionate representation) deployed (baseline in 2013: 0)</p> <p>50 national, district and village laws, decrees and/or regulations related to sustainable fisheries and MPA management approved and under implementation (baseline in 2013: 0)</p> <p>Capacity of 57 <i>lembaga pengelola sumberdaya terumbu karang</i> (community coral reef resource management institutions) strengthened and integrated into local administrative structure (with 15% women in official positions and 30% women as members)</p>	<p>Project surveys</p> <p>PPMS reports</p> <p>Annual reports of MMAF and LIPI</p>	<p>Assumptions</p> <p>District governments internalize extension services</p> <p>District leaders allocate police time to marine surveillance and enforcement</p> <p>Risk</p> <p>Long time needed to codify new functions</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	80% of training participants are performing as per expected MMAF standards (baseline in 2013: 0) 16 DGCF staff (with gender proportionate representation) obtain postgraduate qualifications (baseline in 2013: 0)		
2. Ecosystem-based resource management developed	By 2018: 10 MPA operational management plans updated and approved (baseline in 2013: 0) 7 district and 3 national MPA spatial plans prepared, embedding integrated coastal zone management and projected climate change scenarios (baseline in 2013: 0) 6 Species management plans for threatened and endangered species piloted in selected MPAs (baseline in 2013: 0) (with 30% women's participation in conservation training and implementation management groups)	Project surveys PPMS reports GEF biodiversity tracking tools for MPAs	Assumption MPA evaluations are implemented regularly and consistently Risk Enactment of district regulations and MPA institutional development are slower than project cycle
3. Sustainable marine-based livelihoods improved	By 2018: 100 eco-friendly infrastructure facilities installed (baseline in 2013: 0) 2,000 households provided with livelihood financial and/or input assistance with 30% women beneficiaries (baseline in 2013: 0) 7 model livelihood microenterprises replicated in project areas (baseline in 2013: 0)	Project surveys PPMS reports	Risks Enterprises launched too late to create benefits in time Climate impacts resulting in failures of livelihood models
4. Project management	By 2018: Operational PPMS reporting sex-disaggregated data Quarterly project monitoring and evaluation reports	Project surveys PPMS reports	Assumption Qualified and adequate project staff provided Risk Frequent changes in key project staff
Activities with Milestones			Inputs
1. Coral reef management and institutions strengthened 1.1. Embed national community extension workers in districts and mentor district extension staff (Q2 2015–Q2 2018). 1.2. Prepare regulations for community coral reef resource management institutions and relevant policies, regulations, and bylaws for MPAs (Q4 2014). 1.3. Upgrade community information centers (Q2 2015–Q2 2018). 1.4. Conduct public awareness activities (Q3 2014–Q3 2018). 1.5. Conduct teacher training on local content curriculum for coral reef management (Q3 2014–Q1 2018).			Loan ADB: \$45.52 million Government: \$13.14 million Grant GEF: \$8.0 million

Activities with Milestones	Inputs
<p>1.6. Conduct and supervise regular coral reef health and associated ecosystem and socioeconomic monitoring (Q2 2015–Q3 2018).</p> <p>1.7. Decentralize coral reef information and training center benefit monitoring surveys (Q1 2015–Q3 2018).</p> <p>1.8. Strengthen and institutionalize LIPI's coral reef management information system capacity and database with user-friendly web access (Q1 2015–Q4 2017).</p> <p>1.9. Provide MPA monitoring and surveillance equipment and infrastructure (Q1 2015–Q3 2016).</p> <p>1.10. Support coordinated district and community monitoring and surveillance in MPAs (Q1 2015–Q3 2018).</p> <p>1.11. Provide postgraduate education for DGCF staff (Q2 2015–Q3 2018).</p> <p>1.12. Develop and implement MMAF human resources program through training on conservation, coastal management, EAFM, ecosystem monitoring and data management (Q4 2014–Q3 2018).</p> <p>1.13. Establish learning networks (Q1 2015–Q3 2018).</p> <p>2. Ecosystem-based resource management developed</p> <p>2.1. Finalize district coastal and marine spatial plans (Q1 2015–Q3 2017).</p> <p>2.2. Develop and implement coastal fisheries regulations (Q1 2015–Q2 2018).</p> <p>2.3. Provide integrated coastal zone management training, including climate change adaptation (Q1 2015–Q1 2018).</p> <p>2.4. Complete and approve MPA boundary marking (Q3 2015–Q2 2018).</p> <p>2.5. Establish MPA management board and technical units (Q3 2014–Q3 2018).</p> <p>2.6. Prepare MPA operational management and zoning plans (Q1 2015–Q1 2018).</p> <p>2.7. Pilot marine valuation methodology (Q2 2015–Q1 2017).</p> <p>2.8. Strengthen MPA financial management (Q1 2015–Q1 2018).</p> <p>2.9. Pilot payment for environmental services in at least 2 MPA sites (Q4 2015–Q4 2017).</p> <p>2.10. Mainstream biodiversity into MPA plans (Q2 2015–Q1 2018).</p> <p>2.11. Prepare studies, tools, and policies for sustainable fisheries, ecosystem approach to fisheries management, and MPA networks (Q3 2015–Q1 2018).</p> <p>2.12. Conduct studies on the status of six (6) priority marine threatened species and stock assessment of selected coral reef fishes (Q1 2015–Q4 2017).</p> <p>2.13. Develop and implement management plans for six (6) threatened species and selected coral reef fishes based on EAFM at government's specified fisheries management area (Q2 2015–Q2 2018).</p> <p>2.14. Conduct ecosystem approach to fisheries management training and assessment of district fisheries management performance with ecosystem approach to fisheries management indicators (Q2 2015–Q2 2018).</p> <p>3. Sustainable marine-based livelihoods improved</p> <p>3.1. Conduct business training for economic enterprise staff (Q1 2015–Q1 2018).</p> <p>3.2. Identify and fund national, district, and village MPA infrastructure (e.g., village roads, jetties, ranger posts, sanitation, water supply, homestays, mooring buoys) (Q3 2014–Q1 2018).</p> <p>3.3. Improve value chain and market links for uptake of produce from aquaculture and microenterprises (Q2 2015–Q3 2016).</p> <p>3.4. Conduct feasibility studies of potential enterprises (e.g., grouper, catfish, sea bass, seaweed) (Q4 2014–Q1 2018).</p> <p>3.5. Develop model enterprises in each project village (Q1 2015–Q1 2018).</p> <p>3.6. Conduct business training for microenterprises (Q1 2015–Q1 2018).</p> <p>3.7. Conduct conservation livelihood training and pilot certification regimen (Q1 2015–Q1 2018).</p> <p>4. Project management</p> <p>4.1. Monitor compliance (Q2 2014–Q3 2018).</p> <p>4.2. Coordinate project activities. (Q1 2014–Q4 2018).</p>	

ADB = Asian Development Bank, DGCF= Directorate General Capture Fisheries, EAFM = ecosystem approach to fisheries management, GEF = Global Environment Facility, LIPI = Lembaga Ilmu Pengetahuan Indonesia (Indonesian Institute of Sciences), MMAF = Ministry of Marine Affairs and Fisheries, MPA = marine protected area, PPMS = project performance management system.

^a Monitoring for these indicators will be conducted as per Activity 1.6.

Source: ADB estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=46421-001-3>

1. Loan Agreement
2. Grant Agreement: Global Environment Facility
3. Sector Assessment (Summary): Agriculture, Natural Resources and Environment (Marine and Fishery Subsector)
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Economic and Financial Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Gender Action Plan
11. Environmental Assessment and Review Framework
12. Resettlement Framework: Land Acquisition and Resettlement Framework
13. Indigenous Peoples Planning Framework
14. Risk Assessment and Risk Management Plan

Supplementary Documents

15. Description of the Project Area
16. Sector and Institutional Analysis
17. Subproject Appraisal for Anambas
18. Subproject Appraisal for Bintan
19. Technical Specification for Infrastructures and Equipment in Anambas and Bintan Subprojects
20. Detailed Economic and Financial Analysis
21. Global Environment Facility Endorsement
22. Project Contribution to Climate Change Adaptation and Mitigation in Marine Protected Areas
23. Facts and Figures on Indonesia's Natural Resources
24. Financial Management Assessment