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Final evaluation of Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBLME) project

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**Final evaluation of Sustainable
Management of the Bay of Bengal
Large Marine Ecosystem (BOBLME) project**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
OFFICE OF EVALUATION**

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Acronyms and abbreviations

APFIC	Asia-Pacific Fishery Commission
ASEAN	Association of Southeast Asian Nations
BOBLME	Bay of Bengal Large Marine Ecosystem
BOBP	Bay of Bengal Programme
BOBP-IGO	Bay of Bengal Programme Inter-Governmental Organization
CB-ICM	Community-based Integrated Coastal Management
CCRF	Code of Conduct for Responsible Fisheries
CHM	Critical Habitats Management
CPUE	Catch-per-unit-effort
CSIRO	Commonwealth Scientific and Industrial Research Organization (Australia)
EAFM	Ecosystem Approach to Fisheries Management
ES	Executive Summary
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ETP	Endangered, Threatened, Protected
FAO	Food and Agriculture Organization of the United Nations
FET	Final Evaluation Team
FFI	Fauna and Flora International
FOC	Fisheries and Oceans Canada
FRI	Fisheries Research Institute
FSI	Fishery Survey of India
GCRMN	Global Coral Reef Monitoring Network
GEF	Global Environment Facility
GEO	Global Environmental Objective
GIS	Geographic Information System
GIWA	Global International Waters Assessment
GoM	Gulf of Mannar
GPA	Global Plan of Action
HFMAP	Hilsa Fisheries Management Action Plan (Bangladesh)
ICSF	International Cooperative in Support of Fishworkers
IFIOR	International Forum for the Indian Ocean Region
IIED	International Institute for Environment and Development
IOGOOS	Global Ocean Observing System in the Indian Ocean
IOMAC	Indian Ocean Marine Affairs Cooperation
IORI	Indian Ocean Rim Initiative
IOTC	Indian Ocean Tuna Commission
IUCN	International Union for Conservation of Nature
IW	International Waters
LME	Large Marine Ecosystem
LMMA	Locally Managed Marine Area
LTU	Lead Technical Unit
MFF	Mangroves for the Future
MFTRDI	Marine Fisheries Technological Research and Development Institute (Thailand)
MOMSEI	Monsoon Onset Monitoring and its Social and Ecosystem Impact
MPA	Marine Protected Area
MRC	Marine Research Centre (Maldives)
MRFDMD	(SEAFDEC) Marine Fishery Resources Development and Management Department
MTE	Mid-Term Evaluation

NARA	National Aquatic Resources Research & Development Agency (Sri Lanka)
NACA	Network of Aquaculture Centers for Asia-Pacific
NCSCM	National Centre for Sustainable Coastal Management (India)
NGO	Non-governmental organization
NIOT	National Institute of Ocean Technology (India)
NIVA	Norwegian water research agency
NOAA	National Oceanic and Atmospheric Administration
Norad	Norwegian Agency for Development Cooperation
NPoA	National Plan of Action
NTA	National Technical Advisor
NTF	National Task Force
pa	per annum
PDF	Project Development Facility
PDO	Project Development Objective
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PIF	Project Identification Framework
PIR	Project Implementation Report
PPR	Project Progress Report
ProDoc	Project Document
PSC	Project Steering Committee
PY	Project Year
RAP	FAO Regional Office for Asia and the Pacific
RBM	Results-based management
RC	Regional Coordinator
RCU	Regional Coordination Unit
RFMAC	Regional Fisheries Management Advisory Committee
RFMF	Regional Fisheries Management Forum
RMIT	Royal Melbourne Institute of Technology
RPoA	Regional Plan of Action
RWG	Regional working group
SA	South Asia
SAARC	South Asia Association for Regional Cooperation
SACEP	South Asian Cooperative Environment Programme
SEAFDEC	Southeast Asian Fisheries Development Centres
SAMPAN	Strengthening Andaman MPA Network
SAP	Strategic Action Programme
SAUP	Sea Around Us Project
SCZMC	SAARC Coastal Zone Management Centre
SEA	South East Asia
SIBER	Sustained Indian Ocean Biogeochemistry and Ecosystem Research
SIDA	Swedish International Development Cooperation Agency
SocMon	Global Socioeconomic Monitoring Initiative for Coastal Management
TCP	Technical Cooperation Programme
TDA	Transboundary Diagnostic Analysis
ToR	Terms of Reference
TWAP	Transboundary Waters Assessment Programme
UBC	University of British Columbia
UNEP	United Nations Environment Programme
UNEP EAS/	United Nations Environment Programme for East Asian Seas
RCU	Regional Coordinating Unit
USD	United States Dollar
WCPA	World Commission on Protected Areas

Executive summary

- ES1 The Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBLME) project, an initiative of the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF), was implemented in the eight countries surrounding the Bay of Bengal from 2009 to the end of 2015. A final evaluation of the project was carried out in June and July of 2015. This final evaluation report reviews the project design and the context in which the project was conceived; the institutional arrangements put in place within the region, as well as the eight participating countries to manage the project activities; the results achieved; and an evaluation of the project's performance against what had been planned. A number of conclusions are drawn and recommendations made for future work.
- ES2 The countries bordering the Bay of Bengal region have made efforts over many years to conserve their extensive marine and coastal resources and manage fisheries within sustainable limits. The current initiative arose from the earlier Bay of Bengal Programme for sustainable fisheries (BOBP), implemented by FAO in from 1979 to 2003. The BOBLME project was conceived as a programme involving the eight countries with support from FAO, GEF and other donors, and developed under the GEF International Waters Programme. The project's aims were to improve the health of the marine and coastal ecosystems and living resources across the Bay of Bengal, and the lives of coastal populations of the eight countries.
- ES3 The intended long-term strategy was based on the International Waters Programme model. During the preparatory period from 2002 to 2004, an initial Transboundary Diagnostic Analysis (TDA) was conducted based on desk reviews and the design of the current project, which was intended as the foundational phase of the collaborative management effort (intended to run from 2008 to 2012, but extended to 2015). The TDA was intended to strengthen knowledge of the BOBLME and its ecosystem processes, and to test and demonstrate solutions to the analysed issues; the resulting findings would then form the basis for designing a long-term Strategic Action Programme (SAP), which would be implemented in a second and subsequent phases over the following 7-12 years, from 2016 to perhaps 2025.
- ES4 From 2002 to 2004, with GEF Project Development Facility (PDF) resources received from the World Bank (which was then the GEF agency), FAO commissioned a preliminary TDA of the prevailing marine and coastal ecological and resource management issues across the region, as well as a design proposal for the next phase, the BOBLME project. The process was drastically interrupted by the Indian Ocean tsunami in December 2004; in 2007 the BOBLME project document was reappraised by the eight countries, then resubmitted and approved by GEF in 2008 as a five-year FAO-GEF International Waters Project.
- ES5 The overall project rating is satisfactory, and none of the evaluation items were rated unsatisfactory. This evaluation strongly recommends the development of a second phase geared towards supporting the SAP implementation to facilitate change and improve management in relation to specific management initiatives within country programmes. The Bay of Bengal is a complex region, and the project has developed reasonable formal and informal collaboration among the eight participating countries to address some key issues affecting the health of ecosystem and fisheries resources. The Regional Coordination Unit (RCU) has very ably managed this multi-sectoral project with a broad range of stakeholders – national, regional and international. The RCU has further demonstrated its ability to practice adaptive management when confronted with capacity gaps or constraints, and has successfully negotiated agreement among the countries on many issues. A key milestone was achieved when the Strategic Action Programme was endorsed by the Project Steering Committee and signed, following the final evaluation, by 12 out of 16 partner institutions (to date).
- ES6 ***Project strategy and design:*** The underlying concept or "theory of change" was to establish a long-term regional programme to address the significant marine and coastal resource

management issues and achieve the goal of a healthy ecosystem for the Bay of Bengal. The TDA had identified a range of critical marine resource issues, including overfishing and destructive fishing, degraded coastal habitats and marine wildlife, and reduced water quality; consequent loss of livelihood and economic development opportunities; and major capacity gaps in the eight countries' governance and management systems, institutions and financing, as well as in community consultative arrangements.

- ES7 The five project components were divided into a total of 13 sub-components in the project document; however the project logical framework to deliver these sub-components was not developed below the outcome level. The evaluation concluded that this was inadequate for the main guiding framework for project implementation and monitoring. The design did not express clearly the objectives, planned results, indicators, targets and baseline data, under any of the components or sub-components; nor did it specify the logical connections between the sets of outputs in the hierarchy. In recognition of this weakness, the BOBLME Project Steering Committee (PSC) approved a revised logical framework in March 2010 which identified baseline, targets, sources of verification and risks. While this was used to monitor and report on project progress, particularly in the GEF annual Project Implementation Report, the evaluation concluded that the underdeveloped project design led to impediments for monitoring, internal review, evaluation and learning.
- ES8 **Implementation arrangements:** The current project was planned for a five year period and extended twice to a final end date of December 2015. The initial budget was USD 30.99 million, comprising USD 16.77 million cash and USD 14.22 million in-kind contributions. Additional cash contributions of USD 1.76 million were received during implementation and co-financing was estimated to reach USD 39.79 million (although this included an estimated USD 23 million spent by other organizations on activities that were considered to be relevant to or supportive of the BOBLME project). Overall project direction and liaison with the GEF Secretariat were provided by the FAO GEF Implementation Unit in Rome, and technical supervision and operational support were provided by the FAO Regional Office for Asia and the Pacific (RAP) in Bangkok, through the Lead Technical Unit (LTU) and formal project budget holder. The project established a PSC comprising two senior government officials (one Fisheries, one Environment) from each of the eight countries, plus the FAO LTU and donor representatives. Project execution was delivered through an RCU, established in Phuket, Thailand, which organized project activities in each country in coordination with a National Coordinator, as well as engaging directly with relevant national, sub-regional, regional and international organizations and experts. While recognising this would have required changes in FAO policy and that such arrangements only came into place in the latter half of the extended project, the evaluation concluded that FAO could have increased the effectiveness of the country level activities by enabling each of the FAO country offices¹ to work with and use the BOBLME project to contribute to 'One FAO' programming in the eight countries.
- ES9 The PSC served as the project's governing body over the seven-year period, meeting annually to receive reports and endorse work plans and budgets. The PSC country delegates took the lead in promoting the country consultations for the project's two major outputs, the BOBLME TDA in 2011 and the BOBLME SAP in 2014. However, the evaluation found that the PSC could have provided stronger strategic direction to the overall BOBLME regional initiative and to the development and delivery of the project and individual components; each country's PSC delegates could have provided more guidance to their own country's BOBLME activities. The evaluation further concluded that FAO RAP could have contributed more directly to strategic decision-making for the project if it were given a direct decision-making role in the PSC.
- ES10 In each of the eight countries, a national BOBLME team was intended to comprise a National Coordinator, National Technical Advisor (NTA) and National Task Force, under the guidance of the two PSC delegates as part of the national in-kind contribution. In practice, each country maintained a National Coordinator, but only a few countries appointed an NTA or Task Force. Moreover, there were no effective mechanisms for the PSC members to direct the national teams, National Coordinators, or the country's

¹ Apart from Maldives, which is serviced from Sri Lanka, there is an FAO Representative presence in each of the BOBLME countries.

BOBLME activities. The national institutional arrangements hindered one of the central objectives of the BOBLME project: to facilitate collaborative management of fisheries and the marine environment. The decision to ground the project in fisheries research agencies and to nominate National Coordinators from these arrangements resulted in many project activities being contracted to those agencies, which therefore were primarily directed towards fisheries rather than balanced with activities in national environmental agencies. This level of engagement between the agencies was variable across the countries.

- ES11 ***Analysis of results achieved – Overall and Component 1:*** The evaluation found that the BOBLME project made marginally satisfactory progress towards its main objectives of piloting and demonstrating effective strategies to address the priority problems; strengthening collaborative management of coastal and marine issues in and among the eight countries; and establishing national and regional institutional and financing arrangements for implementation of a long-term BOBLME SAP.
- ES12 Under Component 1, the project prepared the 2012 TDA of “priority transboundary environmental problems in the BOBLME”, which provided a useful basis for planning the current project actions and the SAP. In comparison, the 2015 SAP is limited as a basis for effective strategic action at either the national or regional level. While SAP development was highly consultative, participatory and reflected a consensus of the eight BOBLME countries, the SAP does not convincingly define a set of strategies by which the priority issues will be addressed. It also does not define how the countries will organize and implement their own national SAP, integrate BOBLME actions with national institutional and financing arrangements, or improve inter-sectoral or inter-departmental collaboration. Subsequent to the final evaluation, the evaluation team was informed that as of November 2015, 12 of the 16 signatures required to endorse the SAP had already been obtained.
- ES13 The current project undertook to reassess and revise the preliminary TDA, which was completed in 2004 under the preparatory phase. However, the redrafting, national consultation process and ratification of the comprehensive TDA took more than half of the planned project duration. The evaluation therefore concluded that although the national consultation processes were expansive and increased awareness of the issues affecting the health of the Bay of Bengal and the regional linkages, the project should have exercised adaptive management to combine the TDA-SAP process into a single streamlined ‘action research – action planning’ process, conducted in parallel rather than being managed as two distinct sequential steps. Had this been implemented, the evaluation determined that the institutional constraint of the separation between research agencies, policy/management agencies and fisheries/environment might have been mitigated.
- ES14 Use of the GEF International Waters terminology in the TDA resulted in a significant number of the 54 identified issues and causes to be labelled as “transboundary”. The evaluation found that this was misguided and resulted in an overemphasis being placed on multilateral actions. It is evident that the majority of the identified issues are common to the BOBLME countries rather than strictly transboundary; they do not necessitate all the Bay of Bengal countries acting together to address them. A more effective approach for the project and the TDA-SAP would have been to identify the most practicable opportunities, in single locations and countries, for testing and demonstrating potential solutions.
- ES15 ***Analysis of Results – Component 2. Marine Resources Management and Sustainable Use:*** This largest component was intended to pilot strategies for “regional and sub-regional collaborative management” of priority coastal/marine living natural resources and livelihoods issues, under four sub-components: 2.1 (Community-based) Integrated Coastal Management (ICM); 2.2 Policy Harmonisation (for ICM); 2.3 Fisheries Management; and 2.4 Critical Habitat Management (CHM). During implementation these became merged, and a fifth management approach, 3.2 Marine Protected Areas (MPA), was added to this component.
- ES16 For ICM, two major reviews (SE Asia and South Asia) were prepared, which led to two major series of training exercises: ICM for critical habitats, and community-based or

co-managed fisheries. The project did not progress ICM work sufficiently beyond the review phase, or demonstrate how approaches could be cost-effectively scaled; lessons and recommendations from the ICM reviews did not result in actions to address the common constraints to achieving effective and sustainable ICM. The substantial review work should have been drawn to a more effective conclusion, providing guidance on future strategies for effective work in this field, including specifically how this might be addressed in the SAP.

- ES17 For CHM, the initial situation at project inception was that none of the identified transboundary habitats were viable due to the prevailing political conditions. During the project implementation, this context changed substantially and it became possible to plan actions to facilitate collaborative management of critical sites between pairs of BOBLME countries: work was done in the Gulf of Mannar (India – Sri Lanka) and Myeik Archipelago (Myanmar – Thailand). These areas are highly sensitive, politically, and the project initiated an impartial technical dialogue and information exchange; however, the work did not progress so far as to strengthen agencies' capacities for participatory planning, or to produce management plans, either for the selected bi-national sites or for the critical habitats (mangrove, coral reef and sea-grass) that had been identified. This could have been done, for example, by testing and demonstrating best practice strategies for conserving the critical habitats and associated biodiversity. The evaluation sees great value in continuing the work in the Myeik Archipelago during the SAP implementation stage.
- ES18 For MPA, a Regional working group was formed and a desk study was conducted of existing MPAs in the countries, enabling a (BOBLME) MPA Atlas to be created on the WorldFish ReefBase. A regional workshop developed recommendations for regional and national MPA activities, and in Bangladesh, a national MPA framework was developed to shape MPA policy in the country. The project subsequently supported a variety of in-country actions to improve MPA management. No specific regional MPA action plan was prepared, and no separate BOBLME MPA project was developed.
- ES19 For policy harmonisation, a comprehensive review was commissioned of the countries' policies (fisheries, marine environment, ICM), and a regional workshop was held. However no specific action plan or recommendations were prepared and it seems little further direct work was done on policy harmonisation. The evaluation concluded that policy work should have been integrated with the work on management strategies (e.g. ICM, critical habitats, MPA, fisheries). The policy review had made it clear that implementation and enforcement are major weaknesses, yet little if anything was done to demonstrate effective ways of improving implementation and enforcement through country level pilots.
- ES20 For fisheries management, the objectives were to establish improved institutional arrangements; develop a common fishery information system; and prepare collaborative management plans for three major transboundary fisheries (Indian mackerel, hilsa shad, and sharks). A multilateral Regional working group was formed to guide development of the fisheries management plans and fisheries statistics system. Above them a Regional Fisheries Management Advisory Committee (RFMAC) was established and intended to work under a senior governing body, the Regional Fisheries Management Forum. This Forum was not formed and the RFMAC was deferred, as efforts were put into developing Ecosystem Approach to Fisheries Management (EAFM) capacity. The Regional working groups were the main institutional strengthening mechanism tried by the project (in this and other sub-components), and worked to varying degrees; however, they do not appear to have been evaluated and are not mentioned in the plan for the future program (SAP).
- ES21 The project organized substantial reviews of Indian mackerel and hilsa shad, two of the region's most important fisheries, which produced recommendations for the countries to prepare management plans. Subsequent work to strengthen fisheries management, including testing and proving effective mechanisms for collaborative planning and management, did not progress satisfactorily; the RFMAC prepared Management Advisories for the two fisheries, but these fall short of being satisfactory as fishery management plans. The project also supported the first regional hilsa stock assessment work, training and reports – separately in Bangladesh, Myanmar and India – and this

resulted in an improved understanding of the shared hilsa fishery and what is needed for an ecosystem approach for its management. From 2013 to 2015, a collaborative genetic study of the BOBLME Indian mackerel population involving research institutes in all countries was coordinated by an international genetics expert. This study had not concluded at the time of the final evaluation.

ES22 In mid-project there was a change in focus, from piloting fishery management plans, to training in EAFM. With partners, the project developed a comprehensive EAFM training package and delivered 13 EAFM training events, to 418 participants in five countries. The EAFM training course has been implemented by two regional organizations, BOBP-Inter-Governmental Organization (IGO) and the Southeast Asian Fishery Development Centre (SEAFDEC), and nationally by government agencies in Malaysia and Sri Lanka. While the training materials are of excellent quality and were well received, it is evident that the EAFM training could have been more effective if it were better linked to the project's direct efforts to improve fisheries, critical sites and habitat management, and to the International Cooperative for Support of Fish's (ICSF's) extensive work with local fishing communities.

ES23 *Analysis of Results – Component 3. Improved Understanding of the BOBLME.* The project has strengthened baseline knowledge of the BOBLME processes through contributions to a number of ongoing research initiatives (Global Ocean Observing System in the Indian Ocean (IOGOOS), South East Asia Global Ocean Observing System (SEAGOOS), Sustained Indian Ocean Biogeochemistry and Ecosystem Research (SIBER), and Indian Ocean Commission Sub-Commission for the Western Pacific (IOC-WESTPAC). The evaluation found that this was a relevant and efficient way for the project to operate, and was effective in extending the scope of membership of some of these programs in the BOBLME countries. The project made a significant effort to improve the quality of ecosystem modelling through collaboration with University of British Columbia, involving training and preparation of an exploratory ecosystem model of the BOBLME. In Myanmar, the Norwegian Agency for Development Cooperation (Norad) and the project supported a successful scientific cruise by the RV Fritjof Nansen research vessel to survey the country's marine resources and fisheries, and initiate a coral reef monitoring programme. The project commissioned the Commonwealth Scientific and Industrial Research Organization (CSIRO) to undertake preliminary analysis of ecotypes across the BOBLME, which resulted in the identification and mapping of more than 20 ecosystem sub-regions, providing an excellent higher level ecological baseline. The project developed links with both the global Large Marine Ecosystems (LME) Consultative Committee and the GEF-supported International Waters Program.

ES24 *Analysis of Results – Component 4 Management of Ecosystem Health and Pollution.* The objective of Sub-component 4.1 was to establish an Ecosystem Health Indicator Framework for the region. A Regional working group was established and met once in 2010 to review ecosystem health practices. Governance, pollution and fisheries indicators were tested using different approaches in the BOBLME regional context. This included collaboration with the GEF Transboundary Waters Assessment Programme (TWAP) initiative on LME indicators. Further work was organized at national level: several countries formed working groups and held review workshops on ecosystem health and pollution threats, criteria and remedial strategies; reviewed available data; and formed plans. The project subsequently supported a number of local actions.

ES25 Sub-component 4.2 was designed to establish a Regional Pollution Monitoring and Management Programme. A Regional working group was convened in 2010 to devise a plan of work, and an initial regional list of pollution hotspots was prepared. A review of coastal pollution issues was undertaken in each of the eight countries, producing a useful set of country reports (2011). In 2012 the project convened the regional SAP planning workshop for the theme Pollution and Water Quality, which identified actions to address seven proposed categories of pollutants. In 2013 the project partnered with the South Asian Cooperative Environment Programme (SACEP) and UNEP Global Programme of Action (GPA) to produce a scoping study built on the country reports. In 2014 a modelling study was undertaken by the International Geosphere Biosphere Programme under the UNEP TWAP project. A number of individual country studies were also supported. Some progress towards a regional strategy and action plan on pollution is apparent in the lengthy list of actions under the Pollution Theme of the SAP document.

Recommendations

Recommendation 1: to RAP and GEF Unit

The evaluation recommends that an additional phase of the BOBLME programme is planned as a series of eight national programmes, with a small regional coordinating mechanism. This should be distinct from the current project's focus on establishing a regional programme. Each participating country should be supported in developing its own national programme plan within the broad thematic framework outlined in the BOBLME SAP. This would take the form of a BOBLME National Strategic Action Programme (NSAP). The NSAPs should be developed with a common framework and timetable in order to facilitate the exchange of programme information and joint actions among countries. Each country's NSAP should be designed as an integral part of the country's national system, programming and budgeting mechanisms for marine environment, fisheries and pollution management.

Recommendation 2: to RAP and GEF Unit

Under the common goal of a "healthy marine ecosystem and sustainable marine resource use", each NSAP should be developed to a common three-tiered framework: 1st tier, themes; 2nd tier, thematic strategies; 3rd tier, strategic initiatives. Within this framework, each NSAP should be gender responsive.

Recommendation 3: to RAP and GEF Unit

It is important for each NSAP to be developed in line with the country's planning and management systems, including national development programming and budgeting, with medium-term and annual timetables. Each NSAP should be planned as an integral part of the government's programme, linked to the relevant agencies' work plans and budgets, and operate under the appropriate institutional, law, policy and planning framework.

Recommendation 4: to RAP, GEF Unit and relevant country offices

It is recommended for each country to establish a national steering committee for the development and delivery of the BOBLME NSAP and regional SAP. The NSC should have an annual review and strategic role, and should bring together those government agencies responsible for contributing to components of the NSAP, as well as representatives of key national industries, and social and environmental groups. The FAO Country Programme should also be represented, as well as a member of the NSC. FAO Country Offices should have a role in providing technical assistance, information services and capacity development support to the national theme coordinators and individual strategic initiatives.

Recommendation 5: to RAP and GEF Unit

A future BOBLME regional SAP should be based far more than at present on the national programmes planned in the participating countries. All of the issues identified in the TDA occur in the individual countries, and solutions (strategic initiatives) need to be first identified and tested at country level. As a secondary step, groups of countries can work together on selected sets of common issues and solutions.

1. Introduction

1.1 The BOBLME project

- 1 The Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBLME) project is an initiative of the eight countries bordering the Bay of Bengal – Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand – aimed at maintaining and improving the health of the region's marine and coastal ecosystems and living resources, and consequently the lives of the coastal populations reliant on these resources.
- 2 The BOBLME project, carried out from 2009 to 2015, is intended to be the foundational phase of a long-term collaborative management programme in the Bay of Bengal, under the International Waters Programme supported by the Global Environment Facility (GEF). The Food and Agriculture Organization of the United Nations (FAO) is both the GEF agency and the project executing agency. Project funding was derived from the GEF, the Norwegian Agency for Development Cooperation (Norad), Swedish International Development Cooperation Agency (SIDA), and the eight participating governments.
- 3 The BOBLME project was designed in the period 2003-2004 and the GEF project document was approved in 2008-09, with a total budget of USD 31 million. Project implementation is under the direction of a Project Steering Committee of the national governments and FAO. Project delivery planning, management, monitoring and reporting are organized by a Regional Coordination Unit (RCU) working with National Coordinators and Technical Advisors in each of the eight countries. An extensive programme of regional and national activities has been implemented over a seven-year period, from a start date of April 2009, with two extensions, to an intended completion date of December 2015.
- 4 In addition to regular reviews and adaptive management by the project PSC and management team, there is a requirement to conduct two independent evaluations of the GEF project, around the middle and at the end of the project. A project mid-term evaluation was organized by FAO and carried out by two independent evaluators in 2012, producing a detailed review and analysis of the project's design, performance, issues and recommendations for strengthening the project's delivery. A final evaluation was organized by FAO and carried out by a different team of two evaluators in June and July of 2015. This is the report of the final evaluation.

1.2 Purpose of the final evaluation

- 5 The final evaluation of the BOBLME project was carried out for the purpose of understanding and drawing lessons from what has been done and achieved by the project, with regard to the strategies, activities and results that had been planned and to the broader outcomes that were intended. The final evaluation report should be useful as guidance to national and regional stakeholders for subsequent phases of conservation and sustainable development efforts in the BOBLME countries and region, as well as providing lessons for FAO, GEF and other international partners in developing future interventions. An important consideration was that the BOBLME project is intended to be the first phase of a broad, long-term strategy characteristic of the GEF International Waters initiatives. Major results expected include the TDA, SAP document, supplementary national plans, and the draft plan for the next phase project, each of which was to guide the next phase of work. Annex I of this report presents the Terms of Reference (ToR) provided by FAO for the final evaluation.

1.3 Methodology

- 6 The project was evaluated against the standard, internationally accepted evaluation criteria – relevance, efficiency, effectiveness, sustainability and impact – and guided by a series of key evaluation questions (refer to the ToRs, Annex I). The evaluation also assessed the application of United Nations Common Programming Principles and cross-cutting themes, namely gender equality, capacity development, and partnerships.

- 7 The evaluation used mixed methods of data collection, including the following:
 - A desk review of project documents (see Annex IV);
 - Semi-structured interviews and meetings with FAO regional and country-based staff, project management staff, government officials and participants in project actions in each of the eight countries²; and
 - Direct observations through visits to countries and institutions supported by BOBLME.
- 8 The BOBLME project extends to eight countries and the coastal and marine resources they share across the extensive area of the Bay of Bengal. The timetable allowed the two evaluators to visit together the Project Regional Coordination Unit in Phuket, FAO regional offices in Bangkok, and national stakeholders in Bangkok, Thailand and in Delhi, India. Separately, the team leader visited Male, Sri Lanka (Colombo, Wayamba); Malaysia (Kuala Lumpur, Putrajaya, and Penang); and Jakarta; while the team members visited other parts of India (Mumbai, Kochi, Chennai, and Pondicherry), Bangladesh (Dhaka, Cox's Bazaar) and Myanmar.
- 9 The visits and interviews were used by the evaluators to check and verify specific details and findings, and to gain an understanding of stakeholders' views on pertinent issues, with a focus on the effectiveness of the BOBLME project in achieving the results that had been planned and expected, and stakeholders' views on how future effectiveness in these areas might be strengthened. A record was made of stakeholders' names and positions in relation to the BOBLME project, with notes on the main points raised and views expressed. Annex II of this evaluation provides a record of the organizations and individual stakeholders interviewed in each country and location.
- 10 The evaluation provides a review and evaluation of the complete BOBLME project, with sections on the context within which the project was conceived and developed (Chapter 2); analysis of the project design (Chapter 3); organization of management (Chapter 4); analysis of the project's results (Chapter 5); and evaluation against the main criteria of relevance, efficiency, effectiveness, sustainability and impact (Chapter 6). The evaluation's conclusions and recommendations for future work are presented in Chapter 7.

2 Time and availability did not allow all stakeholders to be interviewed

2. Context of the BOBLME project

2.1 The large marine ecosystem

- 11 The Bay of Bengal region comprises the coastal watersheds, wetlands, islands, reefs, continental shelves and coastal and marine waters of the Maldives, Sri Lanka, the south and east coasts of India, Bangladesh, Myanmar, the west coast of Thailand, the west coast of Peninsular Malaysia, and the Indonesian provinces of Aceh, Riau, and North and West Sumatra. The bay and associated coastal systems covers approximately six million km², and has been identified as one of the world's sixty-four Large Marine Ecosystems (LMEs).
- 12 The Bay of Bengal is classed as a moderately productive³ ecosystem. Although it lacks the nutrient upwelling characteristic of some major LMEs, it is relatively well mixed by a combination of currents, tides, coastal currents, cyclones and storm surges. In its inner reaches it is heavily influenced by the inflow from the Ganges/ Padma, Jamanu/ Brahmaputra, and Irrawaddy river systems. These are all associated with large populations, major cities and intensive agricultural activity, resulting in significant nutrient inputs as well as chemical pollution.
- 13 Inshore habitats in the inner part of the bay are dominated by estuarine habitat, brackish water wetlands and mangrove. Further out can be found seagrass beds and coral reefs. These are of substantial importance to the functioning of the wider ecosystem, and provide spawning and nursery areas for some fish and prawn species. Six areas are of substantial significance in terms of biological diversity: the Sundarbans, one of the world's most extensive mangrove systems; Palk Bay; the Gulf of Mannar; the Marine (Wandur) National Park in the Andaman and Nicobar Islands; the Maldives Atolls; and Mu Ko Similan National Park and Mu Ko Surin National Park in Thailand.

2.2 Resources and value

- 14 **Fisheries:** A great variety of marine and catadromous/ anadromous fish species live in the Bay of Bengal. Total fisheries production is estimated at between around 4.5 million and 7 million tonnes annually. Myanmar is the dominant producer with 2.5 million tonnes of production⁴ followed by Indonesia and India at around one million tonnes each.⁵ Total value of the fisheries has been estimated at approximately USD 32 billion (Emerton 2014). At national and local level some fisheries are of exceptional importance. By way of example, the hilsa fishery is worth about USD 1.3 billion and supports at least one-half million fishers directly and two million in distribution – though some sources suggest up to double this. It is commonly remarked that the Hilsa fishery contributes 1-2 percent of total GDP for Bangladesh. The majority of fisheries production is from inshore waters, typically over the shelf areas of the Straits of Malacca, the Andaman Sea, the seaward fringes to the major deltas, and the Gulf of Mannar. The deep open ocean is far less productive, with potential yield probably a tenth of that of the relatively nutrient rich shelf areas. The most productive fisheries are those for mackerels, hilsa shad, skipjack tuna, and drums or croakers.
- 15 Many species and species groups are fully fished or overfished, with the higher value demersal fish (especially large demersals) under greatest pressure and in the least healthy state. There has been a trend for catch composition to shift from the larger species to low value “trash” fish (now close to one million tonnes, comprising between 16 and 64 percent of the catch, with higher levels in some areas). These are under increasing pressure as demand for feed input to aquaculture increases (APFIC 2012). Unfortunately this catch sometimes comprises a significant proportion of juveniles of higher value fish species.

3 SeaWiFS global primary productivity estimates

4 The Nansen survey supported by the Project indicated that these figures are over-estimates

5 TDA; Emerton, 2014.

- 16 **Coastal habitats:** Coastal and nearshore ecosystems are highly biodiverse and productive, and provide livelihoods for many living along the coast. BOBLME is home to 12 percent of the world's mangroves⁶ and 8 percent of global coral reefs⁷. These habitats, along with seagrass, provide direct benefits in terms of inshore fisheries and shellfish production, fuel and construction timber, medicines and craft raw materials and support large trading networks. They also function as fishery spawning grounds, in nutrient and carbon assimilation, and coastal protection. Using mainly benefit transfer methodology,⁸ Emerton (2014) estimated the direct and indirect value of these habitats as shown in Table 1.

Table 1: Values generated by BOBLME coastal habitats

Service	Employment (direct and indirect)/beneficiary numbers	Value estimate (US\$/year unless otherwise stated)
Mangrove and coral nurseries, food, etc. for fisheries	See above – reference to para 14	16 billion (mangrove) 5 billion (coral)
Non-fish mangrove products	150 000 households	70 million
Sediment capture and shoreline stabilization		4.4 billion (mangrove) 1.8 billion (coral reef)
Shelter against storm	> 1.7 million people protected (mangrove) ; > 0.8 million (coral reefs)	1.1 billion (mangrove) 2.5 billion (coral reef)
Protection against saline intrusion		877 million
Waste-water processing and sediment trapping	>1.7 million	2 billion
Carbon sequestration and storage		511 million sequestered/release avoided 45 billion (stored)
Recreation and tourism	60 million visitor days supporting 1.3 million direct and indirect	9.5 billion a year direct income (spending) 1.1 billion consumer surplus

- 17 **Oil and minerals:** Since the late 1990s, India's New Exploration Licensing Policy has resulted in more than 60 offshore exploration blocks being allocated along its east coast within the Bay of Bengal. There have been significant gas discoveries, with production commencing from the large Dhirubhai deep water gas development in 2009, which have almost doubled India's gas output. Bangladesh has one operational gas field in the Bay of Bengal, and activity to date has been constrained by unresolved maritime boundaries with India and Myanmar. These are now resolved, and more rapid development may be anticipated in future. Some deep water blocks in the Central Bay area and along the west coast of Myanmar are currently being explored. According to the TDA, recent findings in the BOBLME have shown potential for nearly 18 billion barrels of oil equivalent gas, worth some USD 1 trillion.

2.3 People and dependency

- 18 Around one-quarter of the world's population lives in countries bordering the Bay of Bengal, and 400 million people live in the Bay's catchment area. Around 187 million people, or 44 million households, live in the 405 coastal cities and districts which more truly reflect coastal and marine dependency (Emerton 2014). The direct and indirect values to many of these people have been summarized in Table 1.
- 19 Fisheries are of particular importance to poor people. Many of those living in the coastal zone subsist at or below the poverty line, and are often highly dependent on "common access" marine resources. There are many diverse resource niches that create varied opportunities for exploitation (Townsend 2012). These people are often of low social status or caste, lacking in land or skills and have no alternative livelihood opportunities.

6 16 300 km²

7 17 400 km²

8 Using average per ha values derived from detailed studies elsewhere or in a particular location

In this sense fisheries may serve as an important socio-economic safety-net; it is notable that migration into coastal regions appears to be on the increase. Increasingly however, larger commercial interests are seeking to access these same resources, and competition is leading to conflict in some areas. In other areas marine protected areas (MPAs) have been established, and in some cases this has either effectively created outlaws of existing users (Gulf of Mannar) or created even more keen competition in areas outside the MPAs.

2.4 Management and socio-economic issues

- 20 Fisheries and aquaculture: A majority of the existing commercial fisheries in the BOBLME are overfished (related primarily to excess fishing capacity). Catch per unit effort (CPUE) is generally in decline: in parts of India the CPUE is now 25 percent of what it was in 1992; and in Indonesia CPUE for large demersals is 10 percent of its previous value. This has enormous implications for return on labour, the profitability of fishing enterprises, and the management of investment and debt. Moreover, this situation requires increased effort, especially at national level. Given the migratory nature of many fish and fishers, it also requires effective management initiatives and coordination among countries. There is no coordinated regional management or integrated data collection for important transboundary species such as Indian mackerel and hilsa. The latter is especially challenging since it is anadromous (spawns in freshwater) and a significant part of the catch takes place in freshwater. While some legal and regulatory tools exist, and there is some MPA protection, enforcement of management measures is difficult. Crucially, the links between the main agencies that need to be involved in management (marine and freshwater; fisheries and environment) are weak. The rising demand for low value trash fish for aquaculture also presents a major management challenge because of the sheer variety of species being landed, and the prevalence of juveniles of some more valuable commercial species in some areas.
- 21 All of these issues have significant socio-economic and distributive impacts. Most living marine resources are over-exploited because they are open access (the “tragedy of the commons”) and most management initiatives will involve some restrictions on access. Reduced access can be brought about by either by geographic/temporal restrictions (e.g. establishing no go zones, MPAs or seasonal closures); or by allocating rights to users in line with available resources. Either approach will have significant socio-economic impacts and possible re-distributive effects.
- 22 At present, roughly 77 percent of the estimated 400 000 fishing vessels in the LME are small scale artisanal. Many governments are keen to see more offshore fisheries exploited, especially now that EEZ boundaries have been agreed. Some are encouraging investment in larger more modern vessels to this end, though it should be understood that offshore seas are far less productive (probably around one-tenth of shallow shelf fisheries). Any changes in fleet investment and structure will have a profound effect on the distribution of fishery and habitat values, and in particular employment and income per unit resource (e.g. per tonne of fish landed or per tonne of fuelwood harvested).
- 23 Small artisanal vessels landing to numerous stations and traders generate modest income for a large number of people. Larger vessels and more “efficient” value chains generate generally low wages for a relatively small number of boat crew (often poor migrant workers) and a significant number of processing factory workers. A high proportion of value is used to service capital finance requirements and generate profits for investors. The two sub-sectors are not independent – investment in large vessels generates rapid increases in capacity with equally rapid impact on resources, and sometimes indirectly affects the catch per unit effort of the artisanal fleet. What may be seen as economic development and increased efficiency by some sectors of society (and very often by government ministers, processors and exporters), will be seen as appropriation of resources, and unsustainable increases in fishing capacity by others.
- 24 **Critical habitats and pollution:** Socio-economic factors are also driving critical habitat degradation in many areas, and any management initiative will have significant socio-economic impact. Despite the impressive global “value” figures above, the average value per hectare of all products and services generated by mangrove is generally very low compared to the potential value when converted to shrimp ponds, real estate or industrial

parks – at least in the short- to medium-term. As a result, coastal habitats are universally under threat from coastal development, deforestation, aquaculture, eutrophication, chemical pollution, and unsustainable fishing practices (explosives, chemicals, overfishing). Local decision makers will often favour conversion, irrespective of the interests of what will be seen as a relatively small number of poor people. Indeed they may regard such conversion as a potential route to improved access to jobs and increased income for these people. Integrated and community based coastal management approaches are clearly needed and have been widely promoted through a range of development and aid projects, as well as dedicated NGOs. However, the challenges are substantial, the issues complex, and the institutions, protocols and procedures remain weak. Crucially, the driving forces behind coastal degradation are not being adequately addressed.

2.5 Institutional framework

- 25 ***Institutions:*** A wide range of international, regional and sub-regional institutions operate in the Bay of Bengal, many of which have mandates relevant or complementary to the management of the Bay of Bengal ecosystem:
- Asia-Pacific Fishery Commission (APFIC);
 - Bay of Bengal Programme Inter- Governmental Organization (BOBP-IGO);
 - Global Ocean Observing System in the Indian Ocean (IOGOOS);
 - Indian Ocean Marine Affairs Cooperation (IOMAC);
 - Indian Ocean Tuna Commission (IOTC);
 - Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation Sectoral Working Committee on Fisheries;
 - International Forum for the Indian Ocean Region (IFIOR) convened by Australia; and Indian Ocean Rim Initiative;
 - Network of Aquaculture Centers for Asia-Pacific (NACA);
 - South Asian Cooperative Environment Programme (SACEP);
 - South Asia Association for Regional Cooperation (SAARC);
 - Association of Southeast Asian Nations (ASEAN);
 - Southeast Asian Fishery Development Centre (SEAFDEC);
 - United Nations Economic and Social Commission for Asia and the Pacific (ESCAP);
 - UNEP East Asian Seas Regional Coordinating Unit (UNEP EAS/RCU);
 - IUCN.
- 26 There are also other regional level information and service organizations such as Infofish and Globefish.
- 27 A PDF-B phase preliminary study on options for regional coordination assessed several international, regional and sub-regional institutions and programmes and concluded that none had sufficient mandate, geographical scope and/or capacity to support an initiative based on an LME approach, particularly one that addresses the shared management challenges characteristic of the Bay of Bengal. The most obvious organization or institution that might have the capacity is the Bay of Bengal Programme Inter- Governmental Organization (BOBP-IGO) which arose from the historic Bay of Bengal Programme (BOBP). However BOBP-IGO was considered limited by its membership (Bangladesh, India, Sri Lanka and the Maldives only) and lack of resources, skills and mandate. The PDF-B study did not however map the complementary mandates of sub-regional bodies, which, working together, might address some of the higher level management/coordination needs of the BOBLEME as a whole; further institutional analysis was later undertaken as part of the TDA process.

3. Analysis of project concept and design

3.1 Project development process

- 28 Efforts to conserve their extensive marine and coastal resources and manage fisheries within sustainable limits have been made by the countries bordering the region over the past few years. The current initiative was conceived as a programme involving the eight countries, with support from FAO, GEF and other donors, and developed under the GEF International Waters programme.
- 29 The GEF International Waters programme aims to enable a systematic and rigorous approach to the task of strengthening collaborative management of particularly large complex sets of issues, by providing financial support for a number of strategic phases:

Phase 1:	Extensive research, consultation and analysis of the prevailing issues and opportunities for addressing them – to produce a Transboundary Diagnostic Analysis (TDA).
Phase 2:	Piloting and testing methods, practices, strategies; leading to preparation and approval by multiple stakeholders of a plan for a Strategic Action Programme, based on the TDA.
Phase 3:	Implementation of the Strategic Action Programme (SAP).

- 30 The preparatory phase 1 of the BOBLME initiative used a Project Development Facility (GEF PDF) grant in the period 2002-2004, to mobilise an initial regional BOBLME project team; to analyse the prevailing marine and coastal ecological and resource management issues across the region in the form of a TDA; and to prepare a design and proposal for the next phase, the current BOBLME project.
- 31 *The first BOBLME TDA:* At the BOBLME PDF-B First Regional Workshop in 2003, the BOBLME countries decided that the TDA should address three major transboundary environmental concerns: i) overexploitation of living marine resources; ii) degradation of mangroves and coral reefs; and iii) land-based sources of pollution. At subsequent preparatory meetings, the scope was extended to cover all main types of pollution and water quality issues in the region, and to include seagrass as an additional critical habitat. The three main themes of the final TDA were:
- Overexploitation of marine living resources;
 - Degradation of mangroves, coral reefs and seagrass;
 - Pollution and water quality.
- 32 The formulation process for the 2004 BOBLME TDA involved preparation of a series of eight country reports by national teams of environmental and fisheries scientists working under a designated focal person and with national review groups; and five regional thematic reports, based on existing literature, recent scientific findings and the national reports, compiled by a series of consultants, backed by an international scientific review group. The preliminary framework TDA was endorsed by the eight countries and published in 2004. The eight countries agreed that the BOBLME initiative should be “a long-term, 10-15 year programme consisting of two implementation phases.” A concept and design proposal for the first implementation phase was prepared and subsequently submitted to FAO and GEF in 2004 for review, endorsement and funding; this proposal became the current BOBLME Project.
- 33 The Indian Ocean tsunami in December 2004 and its aftermath halted the project development and approval process. The BOBLME project document was eventually reappraised by the eight countries in 2007, resubmitted and approved by the GEF and the countries in 2008-09 as an FAO-GEF project with a five-year plan and budget.

3.2 Project strategy and theory of change

- 34 The theory of change underpinning the BOBLME project is not clearly or consistently articulated in the project document. The theory appears to be that a key strategy towards the goal of a healthy BOBLME will be to address the significant common and transboundary (marine and coastal resources management) issues degrading the BOBLME by means of an effective, efficient, appropriate and long-term mechanism for collaborative regional programming, which will require each country's institutions to have the capacities to commit to and participate in the collaborative mechanism and programme.
- 35 During project development, the major capacity gaps prevailing in the eight countries were identified as: (i) weak implementation and enforcement of inappropriate policies, strategies and legal measures; (ii) lack of alternative livelihoods; (iii) weak institutional capacity; (iv) insufficient budgetary commitments; and (v) lack of community stakeholder consultation and empowerment. Despite this analysis, it was decided that the project would focus on regional institutional arrangements, the justification being that their lack is "one of the key barriers to resolving the issues" causing the existing and further degradation of the coastal and marine resources of the Bay.

3.3 BOBLME project design

- 36 The BOBLME project design is specified in the 2008 project document, which has been used with some minor revisions to guide management and implementation over the subsequent seven years of the project. The 183-page document presents the background, strategy, structure, and implementation arrangements in detail.
- 37 The project design logic is focused on two high-level objectives⁹: the overall goal or **Global Environment Objective** towards which the project and longer term programme should progress, and the project's particular purpose, termed the **Project Development Objective**. Revisions made at project inception included the necessary rephrasing of the Global Environment Objective to give a more substantive focus: "A healthy ecosystem and sustainability of living resources for the benefit of the coastal populations of the Bay of Bengal Large Marine Ecosystem (BOBLME)". The Project Development Objective was also formally revised at the start of the project: "To support a series of strategic interventions that would result in and provide critical inputs into the Strategic Action Programme (SAP), whose implementation will lead to enhanced food security and reduced poverty for coastal communities." This evaluation found the revised PDO to be ambitious as the key statement of the Project's central purpose, as it remained unclear what the substantive objective behind developing a SAP was (i.e. how a SAP will lead to a development change?), and how the quality of the result might be monitored and evaluated.
- 38 The project was planned with four main components, each delivering an outcome, and divided into 13 sub-components, as shown in Table 2. The project's logical framework analysis specified only the higher objectives (GEO, PDO and outcomes), and for each of these a set of indicators and targets, plus the baseline state, the nominated sources of verification (that indicators or targets have been met), and a note on risks (that objectives will not be achieved). The crucial sets of mid-level outputs or results that would need to be achieved in order to attain the higher component/outcome objectives, and the activities that were planned to produce the outputs, are listed and described in the project document text but not in the logframe. This means that output indicators, targets and baseline were not specified in the logframe, as the logframe was only rectified informally in 2012 by adding output indicators, targets and baseline. The 2008 project document Annex 4 also includes lists of planned outputs and activities in text form, but which are not included in the Log Frame.
- 39 A fifth component was concerned with management of the project itself. This is a convenience in project administration, but not good practice, as it reflects transparency for management costs but detracts from the logical structure of the project design.

9 In view of the inconsistent use in the Project Document of the terms "outcome", "output", "result", "indicator" and "target", the FE report uses the term "objective" generically, to mean what was planned at all levels.

Table 2: BOBLME project main components and objectives¹⁰

Overall programme	Global environment objective A healthy ecosystem and sustainability of living resources for the benefit of the coastal populations of the Bay of Bengal Large Marine Ecosystem (BOBLME).
BOBLME project	Project development objective To support a series of strategic interventions that would result in and provide critical inputs into the Strategic Action Programme (SAP), whose implementation will lead to enhanced food security and reduced poverty for coastal communities.
Component 1 Strategic Action Programme (SAP)	Outcome 1 The institutional and programmatic basis for implementing the SAP has been developed.
Sub-Components 1.1 - 1.4	TDA Preparation Establishment of long-term institutional arrangements for BOBLME management Plan a sustainable financing mechanism SAP Formulation and Adoption
Component 2 Coastal/marine natural resources management and sustainable use	Outcome 2 Regional and sub-regional collaborative management approaches applied to priority issues, and barriers affecting coastal/marine living natural resources in the BOBLME, and the livelihoods of dependent coastal communities are removed.
Sub-components 2.1-2.4	Community-based integrated coastal management Improved policy harmonization Collaborative regional fishery assessments and management plans Collaborative critical habitat management
Component 3 Improved understanding and predictability of the BOBLME	Outcome 3 Increased understanding of large-scale processes and ecological dynamics and interdependencies characteristic of the BOBLME.
Sub-components 3.1-3.3	Improved understanding of large-scale processes and dynamics affecting the BOBLME Marine protected areas in the conservation of regional fish stocks Improved regional collaboration
Component 4 Maintenance of ecosystem health and management of pollution	Outcome 4 Institutional arrangements and processes established to support a collaborative approach to ascertain and monitor ecosystem health of the BOBLME.
Sub-components 4.1-4.2	Establishment of an effective ecosystem indicator framework Coastal pollution loading and water quality criteria

40 Considering the complexity, size and scope of the BOBLME project, the evaluation found that the design and logframe were not developed sufficiently to be useful as the main guiding framework for project execution and subsequent monitoring of progress and achievements. The abridged logframe specifies only the main structural components, with each component and even some sub-components designed with budgets of several million dollars for substantial sets of activities, but with no clear logic or strategy. It is good practice for the logical framework to show the full hierarchy of objectives, from sets of activities designed to produce specific tangible results or outputs, to the logical connections between sets of outputs required to achieve the higher level outcomes.

41 The evaluation found similarly that the wording used in the majority of the BOBLME project's objective and indicator statements does not make the substantive objectives clear, and this has impacted the project's achievement of results as analysed in chapter 5. The project design tends to describe the processes, but not to specify the substantive results that are expected. This lack of focus on substance is likely due in part to the design

¹⁰ In Table 1, the FE has highlighted the sections of text that seem to specify the underlying objectives most clearly.

statement that the primary purpose (PDO) was to produce a plan for a programme, the SAP, whereas it would have been more meaningful and useful to have specified “collaborative management” as the PDO. This weakness in design makes it difficult to direct (and to evaluate) the project in moving effectively towards the substantive purpose, and towards the overall goal of a healthy ecosystem. Although the SAP represents a major milestone, the project design does not specify the logical connections between sets of outputs that will result in outcomes, which will lead ultimately to healthier ecosystems, fisheries and livelihoods.

4. Analysis of project management and implementation

- 42 This chapter analyses the BOBLME project's management and administration, including institutional arrangements within FAO and as a regional GEF International Waters project, working in eight countries, alongside other international and national initiatives.

4.1 Project governance and management arrangements

- 43 The BOBLME project is an initiative originally of the World Bank and subsequently FAO, with GEF financing from its International Waters programme, and Norwegian (Norad) and Swedish (SIDA) government co-financing. FAO took on the dual roles of GEF agency and project executing agency, with the FAO GEF unit at the organization's headquarters in Rome providing overall direction and liaison with the GEF Secretariat; implementation supervision and support was provided by the FAO Regional Office for Asia and the Pacific (RAP) in Bangkok. The eight BOBLME countries were directly involved in project governance and supervision through a Project Steering Committee of senior officials. Project execution was organized through a Regional Coordination Unit (RCU), operating under the direction of the PSC. The RCU engaged with countries and their project activities through a National Coordinator, as well as working directly with other relevant sub-regional, regional and international organizations working in the region.
- 44 **FAO:** FAO's principal office directing execution of the project is a senior FAO Fisheries Department officer in the Lead Technical Unit (LTU) at RAP; the formal project budget holder responsible for administrative support, including financial disbursements, has been provided by the RAP Operations Branch. The LTU and budget holder together have overseen project organization and delivery, working directly and closely with the RCU in a valuable relationship. An FAO task force was designated for the BOBLME project, including LTU, budget holder, FAO Regional Representative and FAO-GEF unit. However, the evaluation found that the group has not been consulted regularly during the project. The evaluation also found that the FAO RAP could have contributed more to strategic decision-making for the project implementation. This could have done through the PSC, by exerting its executive authority more dynamically and giving the project a better lead and direction.
- 45 In this regard also, the evaluation found that it would have been highly valuable to have engaged each of the FAO country offices¹¹ in the direction and management of the BOBLME project, rather than just in administrative and logistics support. While recognising the agency's constraints, it is disappointing that despite MTE recommendations and management responses, the BOBLME project has not properly engaged with the FAO country offices, and has not been used to make a significant contribution. Given its scope and resources, the BOBLME project could have made useful contributions to the FAO Country Programming Frameworks; generated synergies through links to FAO national projects and the TCP; and generally played a key role in strengthening FAO programming in the countries and the region, which would have benefited all parties.
- 46 Similarly, although the RCU's liaison with other regional and sub-regional programmes was extensive, only limited links seem to have been made with relevant national or local projects supported by other UN agencies, the World Bank and the GEF¹². It is evident that the project's national teams were not encouraged and enabled to make these connections.
- 47 **Project Steering Committee:** FAO RAP convened a Project Steering Committee (PSC) to serve as the project's governing body. Members were two senior government officials from each of the eight countries (one from fisheries and one from environment), plus

11 Apart from Maldives, which is serviced from Sri Lanka, there is an FAO Representative presence in each of the BOBLME countries.

12 The FE did not compile a list, but noted for example several relevant UNDP-GEF and World Bank integrated coastal-marine projects in India.

representatives from FAO (LTU) and donor organizations. Although there were numerous changes of official country delegates over the six years, the PSC has met annually to endorse annual work plans, budgets and reports, and to receive the numerous technical reports generated under the Project. The PSC country delegates took the lead in promoting and organising the country consultations for the two major project outputs, the BOBLME TDA in 2011 and the BOBLME SAP in 2014.

- 48 The MTE (2012) reviewed the workings of the PSC at some length and concluded that the mechanism could be strengthened by, inter alia, having more consistency of attendees; maintaining functionality between meetings; and enabling the senior country officials to provide more of a lead and steering role for their own countries' BOBLME activities. The evaluation agreed with these findings, but notes that these weaknesses were not rectified following the MTE by the PSC given the countries' internal institutional processes and complexities. Actions were initiated in response to the MTE recommendations, but in most cases were ineffective to changing the ways in which the project was steered and organized.
- 49 The evaluation acknowledged the practical constraints facing individual members, but found that the PSC should have been a stronger governing body, using its authority to give strategic direction and ensure adaptive management of the project. While this would have required more time and attention from the FAO LTU and task force and PSC members, it would have enabled the project to have been more effective, particularly towards the key objective of collaborative management. The PSC has tended to serve an administrative rather than a strategic management function, in part because that is what has been required of it. The BOBLME project implemented a large programme and broad range activities, and the PSC endorsed this activity plan and the activity reports generated each year. PSC members made decisions over the series of project activities implemented in their own countries, and over joint training activities or shared or complementary studies which are managed directly by the BOBLME project's Regional Coordination Unit (RCU). With one exception, the PSC did not act as an inter-governmental body to direct multi-lateral actions, or make strategic decisions over the project progress or individual components: the PSC endorsed the broad change in direction proposed by the RCU to emphasise training programmes, which emerged from capacity development needs rather than pilot actions 'on the ground' (for example, to provide EAFM training rather than further facilitation of sub-regional fishery management plans).
- 50 Project executive team: A Regional Coordinating Unit (RCU) was set up as the project's central management office in Phuket, Thailand with support from the Thai government. The RCU comprised the Regional Coordinator, Chief Technical Advisor, administrative and IT/ web support as a small full-time staff, who organized a highly efficient operation – including activity planning and delivery, information management, communications and liaison, technical assistance and administration – in close liaison with FAO's RAP, LTU and budget holder in Bangkok, for the life of the project.
- 51 The project executive team was to include a National Coordinator and National Technical Advisor (NTA) in each of the eight countries, who were intended to be linked to a national support and outreach network provided by a BOBLME National Task Force, under the overall guidance of the country's senior officials on the PSC. This system was not set up fully and did not function adequately for the BOBLME project. While the National Coordinators were maintained in all countries and generally performed their functions satisfactorily, only a few of the countries appointed an NTA or task force. Moreover, there were no effective mechanisms in the eight countries for the BOBLME PSC members to direct the national teams or National Coordinators, or to oversee and guide country programmes of BOBLME activities.

4.2 Project management

- 52 A summary description of the arrangements for management and administration of the project in the region and each country is provided in Annex V to the report.
- 53 The RCU maintained excellent standards of record keeping, reporting and data management throughout the project, including an effective BOBLME project website, which provides

public access to a substantial catalogue of technical reports and publications. The evaluation considered this resource to be a model best practice for an international project of this sort; however, it should now be given a long-term institutional home within the FAO network, under RAP and especially the seven country offices in order to ensure its utility and access to in-country users.

- 54 The RCU introduced and managed a system of annual work planning and budget preparation, work plan implementation, reporting, monitoring and evaluation. The annual planning cycle comprised an annual meeting of the National Coordinators and Regional Coordinators to share information on the project implementation to date, and to prepare annual work plans, including country activities, for subsequent endorsement by the annual meeting of the PSC. National Coordinator and PSC meetings were held in the first quarter each year, from 2010 to 2015. The intention was that each national team (National Task Force, National Coordinators and NTA, plus the two PSC leads) would prepare a national work plan annually, and that the eight annual national work plans would then be amalgamated into the project's annual regional work plan. In practice this did not happen; the RCU compiled a draft annual regional work plan and this was translated into each country's annual national work plan for the coming year.
- 55 The evaluation accepts that this was an efficient and perhaps the only practical way for the project to operate, but found that the national mechanism has not been as effective as it should have been. A major factor was that the BOBLME project was not planned or delivered as a series of country programmes or sub-projects, but was constrained to operate regionally by the GEF-IW model and apparently by FAO administrative procedures. This meant that the National Coordinators did not have a significant or satisfactory role. A small number of relatively discrete activities was awarded to each country, and the National Coordinators had the task of liaising and obtaining proposals from potential providers for the RCU to contract, and subsequently coordinate and receive reports from contracted service providers. Some National Coordinators complained to the evaluators that some contracts had been set up directly with providers in-country, without significant consultation or coordination with the National Coordinators. The project would have been more effective in its reach and impact on the enabling environment in countries if it had been "adaptively managed" and delivered as a series of coherent country packages, rather than being planned and implemented from a regional office directly.
- 56 The principal mode of Project delivery has been through individual letters of contract issued from the RCU directly to the consultant or agency commissioned to carry out the activity. The small team at the RCU has done a remarkable job in organizing and administering many hundreds of such activity contracts, apparently with great diligence and efficiency, and with good quality controls. The Terminal Report prepared by the RCU states that by March 2015 they had "organized, co-organized or supported 76 meetings, 138 workshops, 107 training events, and managed 272 contracts." These activities were delivered in individual countries or at regional level, under one of the main structural components of the project. The majority of the project's regional activities – studies, reviews and trainings – have been contracted to regional individuals or organizations, scientists and technical experts, and again this has produced high quality outputs in a highly efficient manner.
- 57 The MTE (2012 p.36) urged "more flexible contractual arrangements" to foster partnerships, and stressed that the success of the BOBLME project would "depend on partnerships working together towards a common objective on an equal level. Sustainability of outcomes will largely depend on organizations continuing the work initiated or supported by the project." During its country visits in 2015, the evaluation noted the apparently low levels of ownership, follow-up, impacts or system strengthening that could be associated with the project's activities. Some country respondents to the evaluation expressed a degree of frustration at being inadequately engaged; not being briefed on the whole picture; and not knowing what the project was trying to achieve through its various activities, or how they were supposed to fit together.
- 58 The under-developed project design contributed to an inadequate system being developed for monitoring, internal review, evaluation and learning, considering the size and significance of the project: results-based management is inherently difficult for the BOBLME project because the expected or required results were not defined, and therefore

could not be clearly targeted or monitored. The project's progress and monitoring reports have been produced efficiently but have dealt virtually entirely with activities, because that is what was planned and delivered. For many activities, it is difficult to discern the substantive objectives or expected results and impacts; to know how a set of activities will comprise an effective strategic action; or to understand how different activities relate to each other. This is of particular concern as the BOBLME project has invested large amounts of training focused on strengthening individual skills rather than institutional development; in this field especially it is important to stipulate the purpose of the training, including which institutions and practices in marine resource management it will strengthen.

- 59 **National institutions:** In each country, the national government designated two senior officials, representatives of the Ministries responsible for fisheries and environmental affairs, to lead the country's engagement in the BOBLME project, and to act as country delegates to the PSC and for oversight of their national programmes. The National Coordinators are department heads or staff members within a national fisheries research agency and serve as the national focal point for the execution of the project. An awkward feature of these institutional arrangements has been the lack of a coherent national structure: the National Coordinators are in separate agencies from either of the national delegates to the PSC, and are not under the line authority of either, nor empowered to coordinate and foster collaboration. As noted above, national task forces, which could have provided an institutional framework for the National Coordinators and for multi-sectoral collaboration, were not convened.
- 60 The BOBLME countries, like most countries in the world, have chronic issues with the lack of interaction between their fisheries and environmental agencies. The evaluation found that the national institutional arrangements have hindered one of the central objectives of the BOBLME project: to facilitate collaborative management of fisheries and the marine environment. Project activities have tended to be related primarily to fisheries, and not made sufficiently relevant to the environment sector or conducted as joint actions. Understandably, several PSC environment delegates were relatively disengaged, as the initiative had not been made relevant to them. The project has organized large amounts of training that is of interest to both sectors, much of which specifically emphasises the need for integration between ministries and departments with remits in coastal and marine management, fisheries and pollution.
- 61 One constraint has been the focal point National Coordinators being based in a fisheries research agency, which resulted in many of the project's activity contracts being assigned to marine scientific research. To some extent, this was justifiable at the outset because of the project's focus on gathering information for the TDA through studies and reviews. However, the evaluation found that too much of the project was focused on research and analysis associated with the TDA (refer Chapter 5, Component 2), and that the main focus of the project should instead have involved piloting and demonstrating management strategies, planning and policy, and strengthening existing approaches. This was a major design issue that should have been rectified by adaptive management of the project. For this work, the National Coordinators should have been with a national planning or management authority, rather than in research, and should have been first provided with the capacity and enabled to bring together the country's interests in fisheries and environment. A broader consequence of this institutional issue has been that the current project has not facilitated country pilots or demonstrated successful mechanisms for such collaborative management. This practical pilot work was required in particular under Components 2 and 4, rather than just training, in order to inform planning for the SAP, as was "engagement of senior management and political levels in the relevant ministries," as concluded by the MTE in 2012.

4.3 Financial resources management

- 62 The BOBLME project was designed during the period from 2002 to 2004, with a GEF PDF-B grant of USD 700 000 from the World Bank. The Project plan was for a five-year intervention starting in 2009, with a total budget of USD 30.99 million, comprising USD 16.77 million cash and USD 14.22 million in-kind contributions (as shown in the project document). Additional contributions of USD 1.32 million cash and USD 27.09 million in-kind were received during project implementation, providing a total available budget of USD

59.40 million, although this was not an integrated budget amount under the control of project management. Two extensions to the project timeline were approved, until March 2015 and finally December 2015, with no additional funding.

- 63 The sources for the cash budget, totalling USD 18.09 million, were grants from GEF (USD 12.08 million); Norad (USD 2.05 million); and Sida (USD 1.4 million); in addition to USD 2.55 million from the eight national governments. The GEF and other donor funds were allocated to each of the main project components, while government cash contributions were used to cover the costs of the National Coordinators (part-time), National Technical Advisors (full-time), office space and utilities, and costs of in-country workshops and national participants.
- 64 The substantial in-kind contributions from the national governments were used to cover the costs of the National Task Force members, and national counterpart salaries for workshops, training and local travel time. In addition, Thailand hosted the RCU, and FAO also provided in-kind contributions of human and office resources.
- 65 The budget and expenditure have been managed through preparation of detailed annual work plans and records of disbursement. The great majority of project activities and associated finances have been managed through separate letters of agreement and funding with each individual provider. Records of disbursements and reconciled expenditures have been maintained diligently by the RCU.
- 66 The GEF and other donor funds have been managed by the RCU/FAO RAP using FAO's Oracle accounting software, which has allowed standard line item accounting for each of the main project components and, for GEF funds, sub-components. However, these items were not broken down into finer details, specifically to the level of outputs or results. For both cash and in-kind co-financing, the RCU has also maintained records of the estimated annual expenditure of co-financing by each country on each sub-component. These figures have not been analysed by the evaluation and are not presented in this report.
- 67 Analysis: The BOBLME project plan included a highly prescribed budget, which presented breakdowns of funds from all sources in two different formats: i) the total five-year allocation of funds into each of the 16 "sub-components"; and ii) the annual allocations for each major component; these are broken down into the individual line items in the Oracle chart of accounts. The total funds available to the project could not be managed as a single integrated package by the RCU. In particular, the national government cash contributions to the project were not under RCU control, but were spent in the countries and reported to the PSC annually. The funds administered by the RCU have been managed – budget allocation and expenditure monitoring – in accordance with the Oracle line items. Under this system, details of expenditures to produce each output or result are not readily available to anyone in the system, which is a serious constraint on expenditure monitoring and periodic review processes by management. In order to enable effective project and budget management, a valuable administrative reform would be for FAO and GEF to use a system of outputs-based accounting for their projects, which would be equivalent and complementary to results-based management.
- 68 Under the annual work planning process by the RCU and National Coordinators, expenditures during the previous year were reviewed and the new year's budget was prepared. These records show that expenditures were slow in the initial stages because of delayed start-up; it is a good practice to allow ample time in the project plan for a thorough inception phase, and the mobilisation and organization of the complicated programme of activities, especially at country level. As noted by the MTE and also in the RCU's annual reports (e.g. PIR), both FAO and the national agencies suffer under lengthy and complex administrative processes, whereas to be workable the project needed to administer large numbers of activity agreements much more simply and expeditiously. It took considerable effort and time for countries to provide suitable proposals, and for contracts to be processed through the FAO system.

5. Analysis of results

69 This chapter of the evaluation report reviews and evaluates the achievements of the BOBLME project overall, and by component and sub-component¹³, in accordance with the planned project structure described in the project document. The one exception is Sub-Component 3.2 on MPAs, which is discussed under Component 2.

5.1 Analysis of overall project achievements

70 Considering the time and resources that were spent so far, the evaluation concluded that the BOBLME project made inadequate progress towards the key objectives of strengthening collaborative management of coastal and marine issues in and between the eight countries, and the ultimate goal of sustaining a healthy ecosystem and living resources. It is more than likely that over the life of the project, the health of the BOBLME and the sustainability of its living resources will have continued to degrade, perhaps at a faster rate, given the inexorable increases in human pressures on the ecosystem and the slow pace of introducing any significant mitigating actions. With reference to the PDO indicators, the project has prepared a solid analysis (the TDA) of “priority transboundary environmental problems in the BOBLME” and a plan for a Strategic Action Programme (SAP), which does specify agreed “priorities for action” and includes “proposed actions (to) address the well-being of coastal communities”. However, for the specific critical issues identified in the TDA, the evaluation found that progress overall has been insufficient, particularly in piloting and demonstrating or developing capacity for effective strategies to address any of the priority problems. Much of the considerable amount of activity has focused on further analysis and improved understanding of the issues and fostering national buy-in, but has fallen short of testing, proving and demonstrating solutions to them. This means that the SAP plan has been prepared and signed, despite some of the test cases and results not being completed¹⁴ in time to inform the plan.

71 The project did not give sufficient attention to developing institutional capacities to implement strategic solutions. This may have been due to lack of focus, or inadequate time and funding. While the project found it difficult to elicit proposals, the evaluation found that the countries did show interest and willingness to implement pilot activities and establish demonstration and learning sites. It is evident that the project heavily invested in individual capacity development activities focused on individual ex situ training, and should instead have facilitated a greater range of intensive actions on the ground to review experiences, identify lessons, and pilot and demonstrate management solutions. After six years of the current project, the BOBLME initiative has taken too long to reach its current stage without showing convincing results on the ground.

Box 1: Evaluation’s responses to key evaluation questions posed by FAO¹⁵

1.To what extent the development of the Strategic Action Programme (SAP) was based on analytical framework applying participatory approach and whether it is able to protect the health of the ecosystem and manage the living resources of the Bay on a sustainable basis to improve the food and livelihood security of the region’s coastal population?	• ‘Participation’ in the SAP preparation process was adequate, but could have been strengthened considerably by first enabling the relevant stakeholders in each country to prepare their own national SAP. • The current SAP is not sufficiently developed to guide actions to achieve its objectives.
2.To what extent has BOBLME facilitated and coordinated a sustainable regional institutional arrangement among the region’s countries?	• The countries have agreed to a consortium as a regional institutional arrangement, but at this stage it’s still a concept.

13 The Final Evaluation took place 6 months before the project completion; hence some activities were not yet delivered.

14 The SAP plan has been prepared and signed as the Project’s principal output; although, as the FE were advised, more than 40 activity contracts remain to be completed.

15 A further detailed responses to the key evaluation questions is in sections 5.2 to 5.5.

3. To what extent has BOBLME empowered local communities to participate in processes and decisions associated with the development of sub-regional and regional fishery management plans? And to what extent will it improve the well-being of rural fisher communities?	• The project has provided training in EAFM, which might contribute to future local community participation in fishery management planning, and ultimately contribute to improved well-being of rural fisher communities. • Some progress is evident in the national and regional conservation of sharks, and in some countries the consultative process involved the fishing communities.
4. To what extent has BOBLME created an enabling policy environment and promoted collaborative management of priority transboundary issues (fish refuges, marine protected areas)?	• The project exploited many fora to raise awareness and has reviewed existing policy and management practices, but has not brought about changes in policy, institutional arrangements or practice.
5. To what extent has the BOBLME project expanded knowledge and strengthened understanding and increased awareness of the ecological, human and governance dimensions related to marine living resources of the Bay of Bengal?	• Through reviews and studies the project has generated and made publicly available significant relevant knowledge resources.

5.2 Analysis of results: Component 1 – strategic action programme

72 Outcome 1 was similar to the PDO, “To prepare a Strategic Action Programme (SAP) whose implementation will ensure the long-term institutional and financial sustainability of the BOBLME Programme.” The results achieved under this component include the preparation and publishing of the TDA and SAP documents, both of which are substantial and well-presented documents. The TDA was endorsed by the countries in 2012 and provided a solid and useful basis for planning actions under the current project, as well as leading to SAP. In comparison, SAP would have benefited from further development and specification; it had not been ratified by the countries at the time of the evaluation. In particular, the following planned results were not yet achieved: (i) the SAP plan does not define a set of strategies by which the priority issues will be addressed; rather the SAP contains actions under four thematic area and four strategic areas of work; (ii) the BOBLME countries have not developed national SAPs (which should have been done first, and then amalgamated to form the regional plan), or mechanisms for integrating BOBLME strategic actions with their national planning and budgeting systems; and (iii) institutional and financing arrangements, or systems for governance and management of the SAP and implementation of the proposed strategies, were not defined, agreed¹⁶ or established.

73 Four sub-components were specified, and the results from each are analysed below:

- Sub-Component 1.1 TDA preparation
- Sub-Component 1.2 BOBLME institutional arrangements
- Sub-Component 1.3 Sustainable financing strategy
- Sub-Component 1.4 SAP formulation and adoption

5.2.1 Sub-Component 1.1: TDA preparation

74 In the first PDF phase of the Project, 2002-2004, each of the countries prepared a national TDA, which was compiled into a regional TDA and was used also to formulate the current BOBLME project document. There was then a delay of five years in organising and starting the current project, caused by the December 2004 Indian Ocean tsunami.

¹⁶ Apart from agreeing to a proposed consortium of countries and donor agencies to oversee a further internationally-funded project.

- 75 In 2009, the new project management team (RCU and PSC) reviewed the initial TDA and concluded that it would benefit from inclusion of more scientific evidence on the priority issues and a more rigorous causal chain analysis. The main thematic structure of the analysis had been determined in 2003 and 2004, based on three major environmental themes: overexploitation of marine living resources; degradation of mangroves, coral reefs and seagrass; and pollution and water quality. This structure was retained, and a revised TDA was prepared in 2010 by a number of expert consultants rewriting sections of the initial analysis: socio-economic characteristics; pollution; critical habitats; legal, administrative and political context; biophysical characteristics, marine living resources; and developing a more detailed causal chain analysis.
- 76 In 2011, the redrafted TDA was discussed in each BOBLME country through varied processes, and a regional TDA finalisation workshop was held. In February 2012 the completed TDA was endorsed by the members of the PSC and published in two volumes as the first major output of the BOBLME project. The majority of country interviewees conducted during the evaluation (and the 2012 MTE) found the TDA process and the end product to be valuable. The documents are a rich resource, presenting detailed background information on the coastal and marine environment, living resources and socio-economic characteristics; as well as the legal, policy and administrative arrangements in the eight countries of the region. For each of the three major environmental themes, the main contributory factors were identified, and the proximate and root causes were analysed.
- 77 The redrafting, in-country consultative process and ratification of the TDA took more than half of the planned project duration. It could have been done more rapidly and efficiently, leaving more time and resources to pilot and demonstrate strategies to inform development of the SAP, which was the primary purpose of this phase of the BOBLME initiative.
- 78 The evaluation found that the majority of the 54 issues and causes summarised in the TDA could have been usefully considered common problems facing several or more of the BOBLME countries, rather than all being dubbed “transboundary”, which resulted in too great an emphasis being placed on multilateral actions. The BOBLME project was misguided in this regard by the approach prescribed in the GEF International Waters and LME programmes and, according to the evaluation, should have been adaptively managed to a different approach early in the project life. The relatively few transboundary issues – including overharvested fish stocks that straddle or migrate between countries’ borders – require the involvement of more than one country to properly address the issue and its causes. However, it is evident that the majority of the issues are common to the BOBLME countries but do not necessitate countries acting together to address them. A far more effective approach for the project and the TDA-SAP to adopt would have been to identify opportunities, anywhere in different parts of the region, for practical testing and demonstrating potential solutions to the priority issues. The criterion of practicability would have resulted in the majority of pilots and demonstrations being in single locations or countries, and addressing specific critical issues. Multi-location and multi-country cross-learning and replications could have been introduced as later steps.

5.2.2 Sub-Component 1.2 and 1.3: Institutional arrangements and sustainable financing

- 79 Sub-Components 1.2 and 1.3 were concerned with negotiating and establishing national and regional institutional and financing arrangements for implementation of a long-term BOBLME Strategic Action Programme. The intention was to have “Institutional and financial mechanisms spelled out in the SAP (end of PY5) to ensure Programme sustainability beyond the life of the Project” (PDO Target). The planned process was to analyse and consult on options, and for the countries to determine, negotiate, agree, and then put in place the agreed arrangements.
- 80 The evaluation finds that these objectives were not achieved to a satisfactory degree. Countries have only agreed on the consortium concept with no detailed structures and functions. The project’s draft Terminal Report (2015) states that “Regional institutional and financial arrangements (have been) agreed to in the final SAP”, but the evaluation found this to be an over-statement; the SAP document states merely that “the BOBLME Project Steering Committee endorsed an institutional arrangement for SAP implementation which would consist of a consortium of countries and major partners and donors...”; and

that “this Consortium... will promote information exchange and capacity development; monitor BOBLME health and status; and monitor progress of the SAP implementation...”. On financing, the SAP notes merely that “the regional programme of work is envisaged to be a donor-funded project (of 10-12 years duration)”.

- 81 At a higher level, at the end of the current Project, there is no clear plan for how the countries' institutions will collaborate in implementation of the SAP, nor any indication that collaboration between fisheries and environment – an openly acknowledged problem – will be improved in any of the BOBLME countries. The plan for the SAP (or at least National strategic plans to meet the needs of the SAP) requires considerable further development, to specify both a series of strategic actions, and the institutional and financing arrangements – national and inter-governmental; single sector or multi-sectoral – that will be required to drive them.
- 82 The evaluation considers that there was insufficient promotion and consideration given to other options for institutional arrangements to improve collaboration between the countries. The alternatives raised in an October 2012 regional workshop, of extending and/or integrating existing institutions, do not appear to have been examined or discussed in any detail.
- 83 In addition, inadequate attention has been given in each of the eight countries to formulation of a national SAP, and to planning national institutional and financing arrangements for its implementation. This process should have included drawing lessons from institutional and financing arrangements used for the current project. Moreover, it should have considered especially the institutional reforms that would be needed to strengthen collaborative management between government ministries and participation of the wider range of stakeholders.
- 84 Generally, there seems to have been no significant progress towards agreeing on institutional arrangements for inter-sectoral or inter-departmental collaboration. The project used a series of working groups to bring countries and agencies together to deliberate on specific issues and tasks. For example, “The RFMAC is expected to be the main vehicle for demonstrating that a regional approach to ecosystem based management is being taken” PPR Qtr. 3-4 2013. This mechanism seems to have worked only partially, with little evidence that the working groups resulted in improvements to resource management. The evaluation found no analysis or lessons drawn on the use of multilateral or multi-sectoral working groups as a relevant and effective institutional mechanism for addressing the issues in the TDA and SAP.
- 85 On financing specifically (1.3), the project plan included the following: (i) “to identify a possible financing mechanism(s) to fund, at least partially, the annual recurrent costs of an agreed on BOBLME management structure...”; and (ii) “to assist BOBLME countries to prepare for the mobilization of financial resources and development of financial mechanisms for implementing specific actions... under the SAP” (2008 Project Document p.20). Little seems to have been done in this area, other than in principle discussions with potential external donors. No sustainable financing mechanism has been designed or established. It is merely noted in the SAP that “the regional programme of work is envisaged to be a donor-funded project” (of 10-12 years duration). There is no expression of financial commitment from any source for implementing any part of the SAP, nationally or regionally. A sounder process would have been to formulate the national SAP, including financing, and specifying the countries' contributions to the regional collaboration.
- 86 There does not seem to have been any exploration of financing options for specific issues or SAP components. It would have been valuable for the project to have addressed this issue by systematically including the question of financing into each of the cases of coastal and marine resource management selected for testing and demonstrating under Project Component 2; in other words, testing and proving a financing strategy and (self) sustainability should have been considered as part of the pilot case studies. In all of these cases, it is clear that sustainable and largely self-financing (i.e. local and national) mechanisms will need to be found. Most of the BOBLME countries have considerable national budgets for fisheries and marine environment work, but the evaluation saw no evidence of systematic planning in countries for financing or co-financing the national actions, which form the bulk of the BOBLME SAP. This might change once the SAP is signed and integrated in the national programmes and budgets.

- 87 The project undertook a regional ecosystem services valuation exercise under component 1.3, presumably to raise awareness of the overall regional values involved, with the hope of leveraging funding for phase II. This generated some impressive financial values, based (in the case of critical habitats) on what is openly acknowledged to be highly unreliable methodology¹⁷. From a strategic perspective there is nothing new here: the TDA itself identifies the high values of fishery and fishery dependency. The also TDA identifies mangrove and seagrass as critical in sustaining fisheries values, and so on. It would have been more useful if the exercise had examined the spatial and temporal social and economic trade-offs and financial values that are associated with critical management issues (such as fisheries overcapacity, threats to fisheries nurseries or threats to coastal protection) at a useful and practical geographic scale. This might have been integrated, for example, with the Pondykan mapping pilot and the Myeik Archipelago SOCMON exercise, and taken further to explore how these values might inform mainstream regional and national planning initiatives.
- 88 The case for a regional institution has been overstated throughout the project. It is argued persistently in the TDA for the eight governments to sign on to the BOBLME regional initiative, as in for example: "The conservation and management of the marine environment of the BOBLME requires that projects and activities are implemented effectively across all BOBLME countries through harmonized laws and policies, and robust national and regional institutions with the appropriate jurisdictional mandates and fiscal resources. The transboundary nature of the threats to the BOBLME requires the strengthening of institutional capacity and improved integration and coordination between national and local governments, so as to address these transboundary issues collectively" 2012 TDA p.20. Conversely, it was evident to the evaluation that there may be insufficient value in forging formal Bay-wide institutional arrangements, and that it was misleading to insist that such an outcome was a prerequisite to making substantial achievements in collaborative management of priority issues both within and between BOBLME countries. It is likely to be easier, more relevant, cheaper and just as effective to enable a strategic action programme that is implemented primarily through a variety of complementary local and national actions.

5.2.3 Sub-Component 1.4: SAP formulation and adoption

- 89 An agreed Strategic Action Programme (SAP) plan and institutional arrangements for its management and delivery were the principal outputs expected from the current project. The project achieved this objective in part, with publication of the 52-page SAP document in 2015, which the evaluation understands is likely to be signed by the eight countries' Ministers for Fisheries and for Environment before the end of the year.
- 90 To prepare the SAP, the intended process involved forming national and a regional SAP teams; reaching consensus on high-level Ecological Quality Objectives; organising national then regional consultative planning processes to prepare national SAPs and a regional SAP; culminating in national endorsements, adoption and establishment of implementation mechanisms. In practice, an expedited process was followed: following PSC endorsement of the TDA in March 2012, a number of additional studies were commissioned, and three regional workshops were convened, in May and June 2012, on the three themes – fisheries, habitats and pollution – which were to be the main components of the SAP. Under each theme, participants considered objectives, targets, indicators and potential actions to address the issues and causes identified in the TDA. "Over 400 potential actions to address the issues and causes were identified by technical experts... These include transboundary actions that would be coordinated through a regional mechanism... and selected national actions that would be undertaken by each country", BOBLME SAP document (2015). In December 2012, the lists of regional and national actions were sent to the countries for review and prioritization.
- 91 The process took longer than the project management had hoped, due to difficulties and delays in the countries reviewing the lists of actions and confirming their national plans. The process was led by the PSC members, while the need to ensure "high-level political support for the SAP" (BOBLME PIR 2013-14) was also emphasised, including greater support from the national environment ministries and GEF operational focal points (who are also in the

¹⁷ The use of average per ha values derived from small-scale studies, or studies conducted elsewhere. This takes no account of the massive spatial and regional variations in value, for example associated with coastal protection.

national environment ministries). The national review processes were completed by April 2014, and the agreed priority regional and national actions were entered into the SAP plan. National consultations on the draft SAP document were held in August 2014, the document was endorsed by the PSC in October 2014, and in March 2015 the final document was sent to the countries for signature.

- 92 The final BOBLME SAP (2015) document is well-presented, with an attractive and succinct layout. The programme plan is structured under four major themes: Marine Living Resources; Critical Habitats; Water Quality; and Social and Economic Considerations. For each theme, a set of main objectives is specified, each with a number of targets. To achieve the set of objectives for each theme, lists of regional and national actions are proposed. These are grouped in four categories: i) institutional arrangements, legal and policy reforms; ii) management measures; iii) knowledge strengthening, awareness and communication; and iv) human capacity development. Country stakeholders interviewed for the evaluation, notably the PSC members, generally liked the document and most indicated they could recommend it for signature. Some PSC members were more sceptical or did not like the plan, and raised concerns about the lack of strategy and implementation detail, including in the proposed regional actions and the national action lists. The countries showed no strong commitment to a BOBLME regional programme, or to improving collaboration between environment and fisheries sectors.
- 93 The evaluation found that the project should have practised adaptive management from the outset, by merging the standard (prescribed by GEF IW and LME programming), sequential two steps of TDA and SAP preparation into a single parallel participatory planning process. This would have made the process more efficient and effective by strengthening the connections between TDA issues and the SAP action plans to address them, and between scientists, policy makers, planners and managers. It also would have focused attention from the outset onto planning solutions rather than analysing issues, particularly for identifying a suitable mechanism for a programme of collaborative management actions.
- 94 The SAP document does not provide a convincing series of strategic action plans that will enable the BOBLME countries to address each of their priority shared coastal and marine resources and fisheries issues. The ET considers that both the TDA and SAP should have been focused on the design and development of a portfolio of pilot-demonstration strategic actions, policy development initiatives, and institutional strengthening initiatives, each targeting a priority BOBLME issue. A weakness in the structure of the SAP is that the four categories of actions specified are for different aspects of capacity development; the SAP plan does not recognise that the four categories need to be integrated and to work in tandem in order to achieve the higher objective of addressing the substantive issue effectively. As a consequence, there is no clear strategy proposed for achieving any of the theme objectives; there is no logical hierarchy of objectives and the structure of the plan does not indicate the essential connections between the lists of actions and the high level objectives. Another concern is that the SAP plan does nothing to improve collaboration or integration between environment and fisheries management.
- 95 **National SAPs:** The project's intended focus was on transboundary or shared issues in line with the GEF requirements. The BOBLME SAP would be significantly stronger if it had been developed primarily as a set of eight National SAPs. In its current form, there is no guidance on how a country might proceed to organize and implement its own collaborative programme of work within a regional BOBLME programme. None of the countries appeared to consider the lists of national actions as constituting a national SAP, or to have used the lists to develop a separate national plan. The countries showed little ownership of the action lists, and stakeholders vary in their ideas for using the national actions listed: some have a general intention to use them as checklists when engaging in national planning; one or two thought that the national actions were those which the country had already done; most seemed unclear how the SAP lists might be related or integrated into the country's existing national planning frameworks, such as National Environment Action Plans, Medium-Term National Development Plans or sector Strategic Plans; and none of countries tried to integrate the SAP lists into their existing planning frameworks.
- 96 The evaluation team found that the project and SAP are based on a misconstrued premise that conservation of the BOBLME requires first and foremost a regional programme of

action; whereas it is evident from the lists of proposed actions that the future health of the BOBLME will depend primarily on each of the countries strengthening its management of coastal and marine resources management, fisheries and pollution control. Any regional action takes place in specific localities in specific countries and should therefore be planned first in the countries' national SAP. The BOBLME SAP does not make a convincing case for a major regional programme. Regional cooperation, complementary actions, and some joint management actions will be useful but not essential, and meaningless without the countries providing the actions. It is not valid to insist on planning a regional programme merely because that is what the donor will fund.

- 97 ***Next phase project development:*** An outcome indicator specified in the project document was a "full-size project proposal for second phase of BOBLME programme (SAP implementation) submitted to the GEF." According to the project reports, a consultant was contracted in 2013 to start drafting a Project Identification File for a follow-up project. In 2014 a draft Project Identification File was presented to the SAP finalisation meeting, and subsequently developed by the RCU for submission to the GEF Council meeting in October 2015. The evaluation team was not provided with copies of this material and has not reviewed the proposal for a future project or financing.

5.3 Analysis of Results: Component 2 – Marine resources management and sustainable use

- 98 Component 2 was the largest of the project's four components in terms of budget and scope of activities. The objective was stated as: "Regional and sub-regional collaborative management approaches applied to priority issues, and barriers affecting coastal/ marine living natural resources in the BOBLME, and the livelihoods of dependent coastal communities are removed."
- 99 There was to be a specific focus on rural fishing communities, but in some places a broader purpose was suggested for Component 2 as the testing ground for solutions to BOBLME issues in general. There was also a clear demand from the countries, noted in the project document (2008), to start on-ground activities during the life of the project; "to address critical issues that had been identified throughout the PDF-B process... concomitant with the completion of the TDA and the development of the SAP... to complement and directly feed into the TDA and SAP process."
- 100 Four C.2 sub-components were specified, with the intention of reviewing and then testing different coastal and marine resource management approaches or strategies: 2.1 (Community-based) Integrated Coastal Management (ICM); 2.2 Policy Harmonisation (for ICM)¹⁸; 2.3 Fisheries Management; and 2.4 Critical Habitat Management (CHM). This structure faced a number of political sensitive issues and was not followed through in practice. Instead, the four sub-components were merged with sub-component 3.2 Marine Protected Areas. As a result, the activities implemented under Component 2 were a mixture of different types.¹⁹
- 101 The project has organized a substantial range of activities under this component, with the following general approach: for each "coastal and marine resource management strategy", i) form a regional collaborative working group; ii) review the use of that strategy in each country; iii) plan and conduct activities to pilot, prove and demonstrate best practices. Achievements include a series of working groups established; substantial reviews and studies of a range of approaches and management practices; and a smaller set of pilot projects to test and/or demonstrate different approaches. Separately, the project organized a significant number of extensive training courses to develop individuals' understanding and skills in various fields.

18 "Policy harmonisation" cannot be considered a separate management strategy, equivalent to CB-ICM, but should have been designed as a part of sub-Component 2.1, which in fact was how it was described.

19 The 2012 RCU Report to the PSC provided the following explanation: "The integration of ICM pursuits from Sub-component 2.1 (ICM) and other related sub-components e.g. SC-2.4 (Critical habitats) and SC-3.2 (MPAs). While some national activities are being undertaken (and more may be undertaken in the future), ICM approaches are being implemented at the transboundary pilot sites in the Gulf of Mannar and Myeik Archipelago. This work is being undertaken as part of SC-2.4 (Critical habitats) - which did not have a budget allocated to it in the ProDoc. (SC-2.4). Similarly some countries are undertaking ICM objectives through their MPA work (SC-3.2)."

- 102 Overall, the work under this Component did not progress far enough and did not provide lessons to inform planning of the SAP. The working groups were by and large not effective in driving a regional outcome, but do not appear to have been evaluated as a potential mechanism and are not mentioned in the SAP. The strategic reviews were generally thorough and well-presented, but most did not produce an action plan or lead to a period of practical testing, proving and demonstrating effective ways for the region or countries to proceed with the strategy.
- 103 The following detailed analysis of results achieved reports on the sub-components in the following sequence:
- Sub-Component 2.1 Integrated coastal management
 - Sub-Component 2.4 Critical habitat management
 - Sub-Component 3.2 Marine protected areas
 - Sub-Component 2.2 Policy harmonisation
 - Sub-Component 2.3 Fisheries management

5.3.1 Sub-Component 2.1: (Community-based) integrated coastal management

- 104 The objective for 2.1 was described as “To identify and evaluate the large and diverse body of information and experience associated with promoting: (i) community-based, fisheries and habitat management; (ii) co-management; and (iii) the creation of alternative livelihoods among fisher communities... (collectively termed “community-based integrated coastal management.”) This objective was summarised as “stocktaking and distilling lessons” from existing work in these broad areas, with the subsequent intention to mainstream the lessons through sub-Component 2.2 Policy development. The intention was also to establish national sites (national pilot areas) at which to demonstrate best practices in ICM, as a strategy for promoting replication, with targets as follows:
- National pilot areas for disseminating best practices identified.
 - Lessons learned report on uptake of pilot areas completed and available.
- 105 The main results achieved under C.2.1 CBICM include major reviews of ICM best practices in the BOBLME countries; organization of a range of ICM training exercises; and some support for a number of ICM planning-management activities. The latter include the following activities completed under sub-Component 2.4 (Transboundary demonstration sites in the Gulf of Mannar, Myeik Archipelago, Sundarbans; Vulnerability and resilience assessment in the Ayerawady Delta, Myanmar); and under sub-Component 3.2 Marine Protected Areas.
- 106 **ICM best practices review:** A review was prepared in two parts, one by the WorldFish Centre in 2010 for the SE Asian BOBLME countries (Indonesia, Malaysia, Thailand and Myanmar), and one for the South Asian BOBLME countries (Bangladesh, India, Maldives and Sri Lanka) by IUCN in 2011. Both review parts included a thorough literature review, detailed case study analysis and consultative workshops. The two parts were focussed on different aspects of ICM, with an emphasis on community-based and co-management of fisheries as practised in the South Asia BOBLME countries, and more focus on integrated coastal and marine ecosystem management in the SE Asian countries. Both parts of the review are substantial and well-presented pieces of work. In December 2011, a workshop of all eight countries was held to draw lessons from the two-part review and prepare recommendations and a work plan. The final reports from each workshop included a few general recommendations, but no work plan for further action.
- 107 **ICM training:** Subsequent to the reviews and workshops, over the remaining period of the project, two major series of training courses were organized. The first concerned ICM as critical habitat management, delivered in conjunction with the World Conservation Union, Asian Institute of Technology (IUCN-Asian Institute of Technology), Mangroves of the Future (MFF), SAARC and PEMSEA. The focus was on ICM as inshore coastal-marine habitat management (coral, seagrass, mangrove, estuary), with relatively little content on integrating fisheries management or on local community-centric approaches (2013 BOBLME Socioec-01). The second was a series of around twenty fishery co-management training workshops organized by International Cooperative for Support of Fish (ICSF)

workers, which were delivered between October 2013 and March 2014, mainly in Myanmar, Bangladesh and India, and with related workshops in Thailand, Indonesia and Cambodia. Participants were from local fishing communities and local government officials, and the focus was on fisher access rights and the need for involvement in fishery management decisions. Another workshop/training exercise, on Integrated Coastal Area and River Basin Management training, run by SAARC in 2014, was also supported by the project.

- 108 **ICM actions in countries:** The project supported a small number of in-country activities on ICM, including national workshops in Bangladesh and Myanmar. In 2014 and 2015, training was provided by the South Asia SocMon network (Global Socioeconomic Monitoring Initiative for Coastal Management) in Myanmar, Bangladesh, Chilika Lake (a brackish coastal lagoon in the State of Odisha, India), and in the Mannar District of northern Sri Lanka. In 2015 the Project published an outline for a SocMon regional strategy for South Asia. The only substantive results seems to have been in India, where the project supported work at a BOBLME India Pilot ICM Site and Resource Centre in Puducherry, and a development of a Score Card by the Chilika Lake local authority.
- 109 **Analysis:** The project seems to have achieved much of what it set out to do in this area: it produced two thorough reviews of the issues, which made it clear that strengthening policy and practices in community-based and co-management of ecosystem/habitat conservation and fisheries are highly relevant to each of the eight countries. The evaluation found however that the project has not progressed ICM work sufficiently beyond the reviews or demonstrated how approaches can be cost-effectively scaled. As was emphasised in the South Asian ICM review, there was a further important objective: "To extract lessons from case studies of best practices that could guide the integration of fisheries co-management including the associated ecological system (CBICM) and sustainable livelihoods into the national development processes of governments, i.e., by mainstreaming fisheries co-management." The lessons and recommendations from the ICM reviews did not lead to pilot or demonstrate strategies to address the common constraints to achieving effective and sustainable ICM. The substantial review work should have been drawn to a more effective conclusion, by providing guidance on future strategy for effective work in this field, including specifically in the SAP²⁰.

5.3.2 Sub-component 2.4: Collaborative critical habitat management

- 110 In addition to work on ICM, Critical Habitat Management also included work on a small number of border or bi-national coastal-marine sites where the selected critical habitats were prevalent; as well as separate work on coral reef, mangrove and seagrass conservation; and on endangered marine wildlife protection.
- 111 **Bi-National Sites:** The objective set for sub-Component 2.4 was "To promote multi-national approaches to manage and address issues affecting transboundary coastal/marine eco-systems within the broader BOBLME region". The stated target was "two bi-national management plans for critical transboundary habitats submitted to respective governments." Various specific results were mentioned, including bilateral commissions; a system-wide master plan; permanent bi-national institutional arrangements; increased awareness among the public and decision-makers of the significance of these areas; and improved understanding of alternative livelihood opportunities for reducing pressure on fishery resources. The project document noted also that the "two candidate sites, the Mergui/ Myeik Archipelago (Thailand and Myanmar) and the Gulf of Mannar (India and Sri Lanka), were initially selected... but, due to the prevailing situation, activities are postponed. The BOBLME countries will be invited to select alternative sites during PY1 and PY2."²¹

20 The FE was advised that "Stocktaking of the status of ICM in the region... to distil lessons... was still underway at the time of the FE."; but notes that such analysis and learning should have been done prior to, and used to inform preparation of the SAP plan.

21 This situation should have been resolved during the Project preparation, in the long period between drafting (2004) and approval of the Project Document in 2008: were Gulf of Mannar and Myeik Archipelago suitable sites? Were the respective governments willing to participate in pilot work for bilateral collaboration? If not, a different Project strategy and/ or other sites should have been specified in the design.

- 112 During project implementation, countries were reportedly not able or willing to nominate suitable sites at which ICM/CHM activities (as defined very broadly under 2.1) could be piloted and supported. The initial situation at project start-up was that none of the identified transboundary habitats were viable due to the prevailing political conditions. During the project implementation this context changed substantially, and it became possible to plan actions to facilitate collaborative management of critical sites between pairs of BOBLME countries. Work was done in the Gulf of Mannar (India/Sri Lanka) and Myeik Archipelago (Myanmar/Thailand). The project supported work at the two sites selected for promotion of bi-national collaboration, the Gulf of Mannar and the Myeik Archipelago. Although it was not part of the plan, the project also implemented similar work at additional sites over the past 5-6 years, including the Sunderbans and the Irrawaddy Delta (RC draft Terminal Report (April 2015). The evaluation did not visit any of these sites and therefore formed an incomplete picture of the work supported by the project. A report on the Myeik Archipelago work had not been completed at the time of the evaluation²². Although partial progress was reported to the evaluation team, it is evident that none of the sites achieved results or progress towards bi-lateral institutional arrangements or management plans, nor were they informed by the SAP. Some of the project's NGO partners expressed frustration that the work in Mannar had fallen short of its objectives, perhaps through lack of political support. The activities there did not strengthen the agencies' capacities for participatory planning, or in drafting and implementing Management Plans for the selected sites and critical habitats identified. The BOBLME project did not build upon the work completed through the Gulf of Mannar Biosphere Reserve project in Tamil Nadu State, which included some useful model elements. The evaluation's summary account of project activities in these critical habitat sites/ bi-lateral locations is provided in Annex VIII.
- 113 **Critical habitat management** (coral reef, mangrove, seagrass): most of the project's activities concerning coral reefs, mangroves or seagrasses were at the selected bi-national sites discussed above. A few additional ad hoc activities aimed at strengthening conservation of these critical habitats were funded in the later stages of the project, including the following:
- Support for coral reef monitoring and management in Sri Lanka, through a workshop organized by SCZMC in 2012; and in Andaman, India, through a SAARC training exercise in 2014.
 - Support for an MFF regional training course on Mangrove Restoration and Management, in Thailand in 2013.
 - Support for a national training course on Seagrass Conservation and Monitoring in Myanmar Coastal Zone, in 2013; and for a project to promote ICM approaches to seagrass conservation in Satun Province, Thailand, in 2014.
- 114 It is evident that these activities, although individually successful, did not amount to systematically testing and determining best-practice strategies for conserving mangrove, coral reef or sea-grass, the critical habitats identified in the BOBLME TDA, which formed a major theme in the subsequent SAP. Nor did the project work systematically on threatened species and the loss of biodiversity associated with degradation of critical habitats in the BOBLME, which were flagged in the TDA as issues of major transboundary significance (2012 TDA I p.25).
- 115 **Endangered marine species:** In addition, the project has supported a few ad hoc activities on endangered species of marine wildlife. These included a 2009 Symposium on Indian Ocean Cetaceans in the Maldives, and a 2011 review of marine turtle conservation in the BOBLME region. According to stakeholders, these activities linked well with ICM and MPA work, and provided a useful basis for further conservation action, although this has not yet occurred.

5.3.3 Sub-component 3.2: Marine protected areas in the conservation of regional fish stocks

- 116 As noted above, even though MPA work was placed under Component 3 in the project plan, it related primarily to Component 2, to test and demonstrate best practices in management of

²² The FE met with the IUCN office that had worked in Mannar, but the schedule did not allow sufficient time to visit the IUCN office working in Myeik, nor visit either locality.

coastal-marine resource management and fisheries, including the idea of a regional network of MPAs to protect transboundary resources. During project implementation, 3.2 MPAs was merged with 2.1 ICM. Similarly in this evaluation, MPA work is included under Component 2.

- 117 The objectives set for this sub-Component were: “to develop a better understanding of and promote a more comprehensive approach to the establishment and management of marine protected areas and fish refugia”, with emphasis on their utility for fishery management as well as biodiversity conservation. A broad agenda was planned, including (i) inventory, analysis and mapping of existing MPAs and refugia across the BOBLME countries; (ii) assessment of their effectiveness in conserving biodiversity and fish habitats; leading to (iii) preparation of a regional action plan; and (iv) a separate new project plan for development of a regional or sub-regional MPA systems.
- 118 To drive this agenda, the project set up a BOBLME Regional working group on MPAs and commissioned a comprehensive desk study of existing MPAs across the region. A detailed literature review was used to describe each country’s existing MPA system, site inventories (totalling 161 MPAs), and case studies of specific issues (2011 BOBLME Status of Marine Protected Areas and Fish Refugia in the BOBLME²³). A regional workshop was held and developed a comprehensive set of recommendations, including for the region to develop an MPA learning network and capacity development programme, and to establish a BOBLME regional system of MPAs; for countries to decide on priority steps for strengthening MPAs; and to identify MPAs at which to pilot and demonstrate best practices. The project also supported participants at events in Norway and Thailand, promoting the use of FAO’s Technical Guidelines on MPAs; and in Indonesia, the MPA system is being developed under the Coral Triangle Initiative.
- 119 Following the 2011 study, the project commissioned WorldFish to develop the BOBLME MPA Atlas, an online database on the MPAs in the BOBLME, with maps, case studies and reports, to serve as a platform for the MPA learning network. This database is maintained as part of the WorldFish ReefBase. The evaluation considers the MPA Atlas a useful source of information on MPAs in the region, but notes that the content was taken directly from the 2011 study and has not been updated since the study was compiled. The project also supported some in-country MPA activities in Sri Lanka (refer 2.4 above), Thailand, Bangladesh, Indonesia and Myanmar. A summary of these is provided in Annex VIII.
- 120 The review workshop did not provide the intended action plan nor the proposed separate project plan for further development of regional or sub-regional MPA systems. A key objective of the BOBLME project was to evaluate and strengthen the utility of MPAs for fisheries management as well as biodiversity conservation. However, the 2011 study provided little guidance on collaboration between fishery management and biodiversity conservation in the joint development of MPA/refugia systems and networks. It would have been valuable if the project organized an analysis of the relative merits of collaborating on biodiversity conservation, fishery management, local livelihoods and food security, and nature-based tourism. Likewise, it could have addressed the cross-over between the variety of marine area-based resource management models (CBICM, CGFM, MPAs, LMMA) and multiple-use resource management schemes, such as the marine biosphere reserves and marine parks, which are being trialled or have been developed in various BOBLME countries.
- 121 Generally, it is evident that the project and the MPA working group have not been able to resolve key challenges, derive clear principles, or present a set of model strategies and suitable tools for States, local governments and communities to adapt and adopt in their portions of the BOBLME. In Bangladesh, a national MPA framework to shape MPA policy in the country was developed. The project subsequently supported a variety of in-country actions to improve MPA management. No specific regional MPA action plan was prepared, and no separate BOBLME MPA project was developed. As with other marine resource management tools investigated, it would have been valuable for the project to have progressed this component of work beyond the review stage; to have identified cases and sites which demonstrate effective practices for planning, establishing, managing and monitoring; and to have framed a longer term national action strategy that could be an integral part of each BOBLME national action plan and SAP.

23 The Project prepared a companion review of “fisheries refugia, fish sanctuaries, and management systems in the South China Sea and the Philippines” in 2011, not seen by the FE.

5.3.4 Sub-component 2.2: Improved policy harmonization

- 122 The objective for sub-Component 2.2 (expressed in the project document as the Expected Result) was “Improved environment and capacity to formulate policies supportive of sustainable community-based integrated coastal management.” This relatively narrow plan to improve policy specifically for community-based integrated coastal management (CB-ICM), by applying lessons drawn under sub-Component 2.1, was not followed. In practice, the project considered policy more broadly²⁴.
- 123 The main result achieved was a 2012 comparative review of BOBLME countries’ policy processes, content and implementation in fisheries, marine environment, and integrated coastal management. The review process included national experts completing detailed questionnaires on the countries’ policies, processes and contents, covering each of the three nominated sectors; and Policy Review Workshops in each country and the region. Other results achieved under this sub-Component include a 2014 regional workshop with IOTC on International Fisheries Conventions.
- 124 **Analysis:** Beyond the policy review, the evaluation found that little direct work has been done under this sub-Component, either to strengthen capacity in policy formulation, or to establish “a normative documents portal” as was proposed; while noting the Terminal Report (draft April, 2015) statement that “policy capacity development has occurred through other project activities, especially those involving sharks, hilsa, Indian mackerel, gender and MPAs.” One of the main objectives of the regional policy workshop in 2012, “to develop a work plan and recommendations for future action or work on harmonizing policies and strengthening policy making capacity”, was not achieved; there seems to have been no follow-up to the 2012 workshop organized, and no systematic action plan implemented for policy harmonization across the fisheries, ICM and marine environment fields. While the MTE reported (March 2012) that a “Regional policy Group will produce a work plan in 2012”, the evaluation did not see evidence of a work plan or of the Regional Group operation. The MTE also reported that “Indicator 24, Final report on policy formulation capacity building for community based ICM” was 100 percent achieved and rated ‘S’. The evaluation has not seen this final report, and it is not listed in the project’s activities and results (Annex III BOBLME Activities & Results 2009-2015).
- 125 A key aim of the policy work was to strengthen the vertical integration of policy, especially the formulation of management plans for a specific resource, issue or site. The evaluation found no evidence, for example, of a model management plan, or that the project had strengthened countries’ capacities in this area. Nor did the evaluation find evidence that the project has achieved the objectives of closer collaboration or harmonization of policy or institutions – either among fisheries, marine environment and integrated coastal management fields within countries, or among the BOBLME countries. Undoubtedly, the skills of country officials attending workshops and training exercises, in EAFM and ICM, and their awareness of the need for policy harmonisation, must have increased. However, it is not evident that national and local systems and policies supportive of coastal and marine resource management have been substantially improved through the project’s efforts; nor has policy harmonization between BOBLME countries or, equally important, between sectors in relation to ICM or coastal and marine resource management.
- 126 The evaluation concluded that the project’s policy work should not have been undertaken as a separate sub-Component, but instead should have been integrated with the work on management strategies (e.g. ICM, critical habitats, MPAs and fisheries), in order to provide sharper focus and direction. It would have been valuable also for the project to have introduced a SMART objective or impact indicators relating to policy, and monitored progress against this objective. For example, the objective and indicator of success should have been improved management of a fishery (or a least an audited best practice management plan or Fishery Improvement Plan), rather than merely to develop improved policy or management plans. The overall analysis of the BOBLME countries’ laws and policies governing coastal and marine resource use issues had made it clear that policy

24 Although the FE notes that the wider scope of coastal and marine ecosystem issues identified in the TDA – coastal urbanisation, infrastructure development, tourism and recreation, land-based sources of pollution, adaptation to climate change impacts, biodiversity conservation – were not to be addressed under this sub-Component or elsewhere in the Project.

implementation and enforcement are a major weakness in the system; yet little if anything was done through the project to pilot and demonstrate effective ways of improving implementation and enforcement.

5.3.5 Sub-component 2.3: Collaborative regional fishery assessments and management plans

- 127 The objective of this sub-Component (specified as an Expected Result) was improved management of selected transboundary fish stocks through: (i) effective institutional arrangements; (ii) regional or sub-regional fisheries management plans; and (iii) a common fishery information system.
- 128 *Institutional arrangements for collaborative management of fish stocks:* The project promoted the formation of a Regional Fisheries Management Advisory Committee (RFMAC) in 2011, with members from the eight BOBLME countries, plus SEAFDEC, FAO, BOBP-IGO, and IUCN. The intention was to establish also a higher level, decision-making body, the Regional Fisheries Management Forum, to receive and act on advice from the RFMAC. However, this idea has not been realized. A third tier of technical working groups was formed to coordinate activities among the BOBLME countries on each of the selected fisheries, for Indian mackerel, hilsa and sharks.
- 129 The Regional working groups (RWG) seem to have been regarded as a useful mechanism for strengthening communications between national and international scientists and technical experts working in the respective fisheries. Each has met several times during the project to discuss and plan joint actions and share in the results, as shown in the table below:

Table 3. Frequency of fisheries RWG meetings in each project year

Working group	2010	2011	2012	2013	2014	2015
Fisheries assessment	2					
Hilsa		3	2		1	
Indian Mackerel		1	1	1	1	1
Shark		1				
Fisheries statistics	1		1		1	
RFMAC			1			

- 130 The BOBLME RFMAC was tasked with drafting common or joint fisheries management plans for hilsa and Indian mackerel (but not with facilitating development of NPOAs for sharks), based on advice and the results achieved through the working groups. As noted below, the RFMAC released "Management Advisory" notes for Indian mackerel and hilsa fisheries in 2012, but these fell well short of being draft management plans. There has been only one meeting of the RFMAC, and the evaluation considered it unsatisfactory: the RFMAC did not convene as advised to conclude an agreement on hilsa fishery co-management between India, Bangladesh and Myanmar. The RCU advice to the evaluation was that the countries were not yet ready to delegate fisheries management responsibilities (i.e. to form a higher level, decision-making body), and therefore the RFMAC was stalled.
- 131 Unsatisfactory progress was made generally towards joint management plans, especially considering the objective of 2.2 Policy harmonisation, and the amount of fishery planning work done prior to the BOBLME project (on sharks, hilsa, Indian mackerel and other species), both in individual countries and under other multi-lateral arrangements such as the BOBP-IGO and SEAFDEC, and by international programmes and agencies such as FAO.
- 132 The project does not appear to have conducted any objective appraisal of the costs, benefits and effectiveness of the institutional mechanisms that it has invested in trialling, at

least in order to inform the proposed next phase of the BOBLME initiative. At the end of the project, the proposal in the 2015 SAP, to “establish arrangements for better cooperation in the management of fish stocks shared between countries in the BOBLME region (such as regional fisheries management organizations/advisory bodies and technical committees)”, is no different from what was proposed in the 2008 project document.

- 133 ***Collaborative management of transboundary fish stocks:*** The key transboundary fish stocks were selected well in advance²⁵, in the 2004 initial TDA and project formulation, and specified as planned outputs in the project document (2008):
- A sub-regional fishery management plan for Indian mackerel, involving Bangladesh, India, Indonesia, Malaysia, Myanmar, and Thailand;
 - A sub-regional fishery management plan for hilsa across the sub-region, in Bangladesh, India, and Myanmar;
 - A regional management plan for sharks, across the whole BOBLME region.
- 134 As its major first step in delivering sub-Component 2.3, the project commissioned a comprehensive study of Indian mackerel and hilsa fisheries in each of the BOBLME countries (undertaken by Poseidon consulting company (2011 BOBLME Ecology-09)) to provide benchmark assessments and guide development of the two proposed sub-regional fisheries management plans.
- 135 ***Sub-Regional Fishery Management – Indian Mackerel:*** The objective was to improve collaborative management of the fishery between Bangladesh, India, Indonesia, Malaysia, Myanmar and Thailand. Poseidon’s 2011 assessment of the importance of the Indian mackerel for both small-scale and industrial fisheries in each of the BOBLME countries, and detailed analysis of the performance of each national fishery, concluded in summary that: i) “the entire Indian Ocean population consists of a single stock and needs to be managed as such”; and ii) “although it is a productive and resilient species, the Indian mackerel stock is under considerable fishing pressure and considered to be overfished through most of the region.” Recommendations made for strengthened management measures included improving information on stock status, including fisheries-independent data, and on population genetics; guidance was also provided on the development of a Regional Fisheries Management Plan for the species.
- 136 The Project facilitated an Indian Mackerel Stock Assessment working group, composed of fishery scientists from the countries who met in 2011 and 2012. Discussions focused on stock assessment and the limited knowledge about the population, any sub-populations, migration, spawning or genetic structure across the BOBLME region. The WG meetings prepared summary advice notes on the state of knowledge of the Indian mackerel stock in the BOBLME, describing it as “unknown... with no conclusive stock assessments available”; the summary also noted that the fishery in all countries showed reasonably stable catch trends.
- 137 In 2012, a Management Advisory for the Bay of Bengal Indian mackerel fishery was released by the RFMAC. It presents a summary of the facts available about the stock and fishery; an analysis of management options; key messages and recommendations; and refers to the relevant parts of the proposed BOBLME Strategic Action Programme.
- 138 ***Indian mackerel genetics study:*** A 2012 working group meeting designed a genetic study of the BOBLME Indian mackerel population, which the Project supported from 2013 to 2015, led by a senior scientist from the Genetics Lab at Fisheries and Oceans Canada (FOC), and implemented through India’s National Bureau on Fish Genetics Resources plus SEAFDEC MFRDMD and the Fisheries Research Institute (FRI) in Malaysia; Sri Lanka’s National Aquatic Resources Research and Development agency (NARA); and Thailand’s Chulalongkorn University.
- 139 Following training in the sampling methodology, development of genetic markers and protocols and collection and analysis of samples, the countries provided their collated data

25 National Coordinators expressed some frustration that they had no say in such decisions and no ability to suggest different targets or directions.

(February 2015) for analysis by the FOC Genetics Lab, which is due to report in July 2015. Some concern was expressed by participants, inter alia in Malaysia and India, that it would have been preferable for the project to have enabled country participants to be more closely involved in the analysis of the genetics data. Furthermore, the countries' fisheries scientists and managers could have been engaged in the work in order to learn how to apply the newly acquired data to improve management of the fishery.

- 140 ***Sub-Regional Fishery Management – Hilsa Shad:*** The project commissioned an assessment on the Status of Hilsa (*Tenualosa ilisha*) Management in the Bay of Bengal in 2010, which concluded that hilsa are over-exploited in Bangladesh and probably in India, with much less information available from Myanmar (Milton 2010). The project's further major study in 2010 of the Indian mackerel and hilsa fisheries (2011 BOBLME Ecology-09 Assessments) considered the shad fishery in the northern Bay of Bengal to be targeting a single highly productive but overfished stock, which is particularly vulnerable to fishing during its riverine migration.
- 141 The reviews emphasized the importance of regional coordination of hilsa management, plus the need for including wider ecosystem conservation measures, in addition to fisheries management. Guidance was provided on the development of a regional fisheries management plan for hilsa; however the evaluation notes that this guidance did not include suggestions for hilsa habitat conservation measures. The 2010 study also reviewed the large amounts of work on hilsa that had been done prior to the project and was still underway in Bangladesh and India, and which had already produced a Bangladesh Hilsa Fisheries Management Action Plan (HFMAP), and an Indian National Plan of Action (NPOA) for the Conservation and Sustainable Development of Hilsa Fisheries. Hilsa management measures that were reportedly already in place in these countries include sanctuaries, temporal closures, gear restrictions, and fisher compensation schemes. A Regional Plan of Action (RPOA) for hilsa management in the Bay of Bengal was also reported to have been under preparation through the BOBP-IGO, with a 2nd Regional Consultation on hilsa fisheries organized in 2010, presumably between India, Bangladesh and Myanmar, which did not apparently progress further. The 2010 Milton study report (which was also presented at the 2010 Regional Consultation) emphasised the importance of rationalising or integrating such policies: "it is essential that these various plans are harmonized at the national and regional levels to reduce institutional competition that is an ineffective use of finite financial resources and can confuse fishers and other stakeholders."
- 142 In 2011, the BOBLME project supported formation of a Hilsa Shad working group, with members from Bangladesh, India and Myanmar. Six meetings were held from 2011 to 2014. In 2012, the project published an RFMAC "Management advisory for the Bay of Bengal hilsa fishery", similar to the one for Indian mackerel. Both were promoted by the RCU as "draft precursor(s) to RFMP" (project draft Terminal Report 2015). In 2012 the RCU advised the PSC that the RFMAC had "delivered draft fisheries management plans for hilsa and Indian mackerel. The RCU is currently investigating the possibility of constituting a fisheries decision making forum (to consider the advisories) under the auspices of BOBP-IGO and SEAFDEC. This may or may not be possible in time left in the project depending on the plans of both these organizations." The evaluation found that the Fishery Management Advisories for both hilsa and Indian mackerel were simple summaries of information that had been collated at the outset of the project through the two comprehensive 2010 reviews. Moreover, the evaluation does not consider that these summaries represent "considerable progress" as claimed in the 2015 draft Terminal Report.
- 143 In 2013, the project contracted Bangladesh's Fisheries Research Institute to update data on hilsa stocks and build capacity for hilsa stock assessment. BFRI organized (i) the collection of length-frequency data from hilsa landings; (ii) analysis of BFRI's historic catch and effort data on hilsa; (iii) collection of current seasonal catch and effort data over a 13 month period; (iv) a training course for Bangladeshi hilsa experts; and (v) assessment of the status of hilsa resources (BOBLME-2014-Ecology-06). The BOBLME project also organized a fisheries stock assessment training workshop (with IOTC, May 2013), at which the Hilsa Fisheries Assessment working group updated the model for regional hilsa stock assessment. The evaluation was advised subsequently of hilsa stock assessment work undertaken with government partners in India and Myanmar, from which reports and management recommendations were not yet available at the time of the evaluation.

- 144 **Analysis:** The three hilsa countries, Bangladesh, India, Myanmar, were keen to reach an agreement on a common fishery management plan for hilsa. It is not clear why this was not achieved during the life of the project, considering the amount of previous and parallel work (IIED/Darwin Initiative and Myfish (WorldFish/ USAID)) done in both Bangladesh and India, and the opportunity provided by the project, as was reflected in the preliminary TDA and the 2008 project document: "it was judged to be most practical to address (the conflict between small- and large-scale operators) at a sub-regional level (Hilsa and Indian mackerel, respectively). Many management interventions are possible and the opportunity to learn from others is a major advantage (these could include zoning, gear restrictions, seasonal closures and/or setting up of protected areas or fish refugia)" (project document p.168).
- 145 It is evident that the focus of the project's work on hilsa and Indian mackerel was on improving scientific understanding of the biology and stock status, and did not progress sufficiently to strengthen fishery management measures, including testing and proving effective mechanisms and processes for collaborative planning and management of fisheries.
- 146 The project's draft Terminal Report (April 2015) states that it was too ambitious to try to develop transboundary fishery management plans ("the barriers and sensitivities to the development of these sub-regional plans were under-estimated"). However, it is evident that the mechanisms tried (working groups and RFMAC) could have been modified and made more progress toward both developing and implementing a multi-lateral Fishery Management Plan for hilsa, building on the foundations that existed in the countries. The working groups and RFMAC should have involved policy makers and fishery managers as well as scientists; should have had greater ownership, political reach and authority in the countries; and should have been supported more robustly by the regional mechanism governing the BOBLME project, the Project Steering Committee. In addition, the evaluation found that the project could have done more to analyse or drawn lessons from this pilot work on hilsa, and to appraise the relevance and efficacy of various possible approaches for the countries to strengthen their management of transboundary fish stocks.
- 147 **Collaborative management of sharks:** Sharks collectively were specified in the project document (2008) as one of the transboundary fish stocks for which it aimed to pilot and demonstrate effective collaborative management approaches. A regional shark management plan was described as a key regional-level output, the project's only proposed region-wide fishery management plan (project document p.87). The project's approach towards regional collaboration on shark fisheries management and conservation was to first assist countries to work on National Plans of Action (NPoA) and ancillary in-country activities, and subsequently to draw these together into a Regional PoA for all the BOBLME countries.
- 148 A BOBLME Regional Sharks working group was established and met once, in 2011. In 2012, Maldives reported on their national shark management work. In 2013, Sri Lanka reported on its progress towards developing a shark NPoA; SEAFDEC organized a project in Malaysia to improve shark species catch data; and the project prepared a review of the status of NPoA in the BOBLME countries.²⁶ In 2014, the project collaborated in a Convention on Biological Diversity and Convention on International Trade in Endangered Species workshop on sharks, held in India. In addition, workshops on shark taxonomy were organized with SEAFDEC in 2014, and with FFI in 2015, which were found valuable by stakeholders in Myanmar and Malaysia. A series of stakeholder meetings on shark were conducted in 2013, and several awareness raising initiatives supported in 2014. Country stakeholders advised the evaluation of variable progress being made through the project's support, and on strengthening their national management and conservation of sharks. A summary account of these actions is in Annex VIII.
- 149 **Analysis:** The project appears to have achieved reasonable results in assisting countries to strengthen the national management of shark species, building on a variety of prior efforts. It is evident that countries do not yet have effective systems in place for policies to produce a change in practices, or for NPoA implementation, enforcement and monitoring impacts – on the sharks or on the fishers. The process followed has provided limited inter-country exchange of experiences and learning, or collaboration across the region on shark conservation and fishery management. Likewise, there was little cooperation on what constitutes an effective NPoA for sharks, and none of the country stakeholders appeared to have knowledge of

26 The FE did not see or review this report.

or involvement in any collaborative process. It would be valuable if the project could have prepared an analysis and drawn lessons on the appropriateness and effectiveness of the particular approach that was taken for improving collaboration in shark fisheries management.

- 150 The Regional working group on sharks met only once and regional work has progressed slowly. The evaluation was advised of but did not confirm an existing RPoA for the South East Asian BOBLME countries, which does not seem to have been shared. The RCU reported to the PSC in 2012 that a draft regional plan of action would be prepared by the end of 2013. In addition, the RCU advised the evaluation team that an RPOA, incorporating a review of NPOA status, was being drafted at the time of the evaluation and has since been produced.
- 151 ***Establishment of a common fishery data/information system:*** The project planned to design and institute a common system across the BOBLME countries, including three targets of a Regional working group, common protocols, and improved fisheries data and information reports. A Regional Fisheries Statistics working group was formed in 2010, and held meetings again in 2012 and 2014. To facilitate and guide the work, the project commissioned an expert review in 2012 of the countries' fisheries data collection systems. This provided detailed information on the strengths and weaknesses of each country's system, and presented a full set of recommendations for the countries and the BOBLME project to consider (2012 BOBLME document Ecology-06). The focus was primarily on small pelagic fish, hilsa and Indian mackerel, but the findings were considered to be applicable generally to the national fisheries data collection systems. The intention was for the country representatives to use the review findings and recommendations to agree on a plan of priority actions that could be undertaken with further project support.
- 152 The evaluation is not aware that the Statistics RWG prepared an action plan for fisheries statistics work, nor that regional fisheries statistical protocols were agreed and put in place; although the MTE reported that the latter were expected to be completed by the working group in March 2012.
- 153 A number of training activities were organized towards improved fisheries data: in 2010 SEAFDEC organized a SE Asian regional consultation on fishery information and statistics; in 2011 a report was compiled on fisheries catches in the BOBLME countries since 1950; and in 2011, 2012 and 2013, a series of Fisheries Stock Assessment training exercises were organized for all the BOBLME countries. A joint exercise was held with APFIC to provide training for strengthening the assessment of fisheries and aquaculture in the Asia and the Pacific islands region. In 2013 and 2014, the project organized, with SEAFDEC and IOTC, two training workshops on fisheries data processing, and one workshop on strengthening the region's Large Pelagic Fishery Database. In 2015, a regional training workshop concerning fishing capacity was held.
- 154 Project files record also a number of ancillary activities related to fishing, including a campaign on ghost fishing threats to endangered species, especially turtles in Maldives; and workshops with SEAFDEC and IOTC on neritic tuna.
- 155 ***Additional training for improved fisheries management:*** The project invested heavily in providing technical training in the Ecosystem Approach to Fisheries Management (EAFM) and related Code of Conduct in Responsible Fishing (CCRF), which had not been planned at the outset. The rationale for including this work is given in the project's draft Terminal Report: "The development of fishery management plans (FMPs) using an EAFM approach is a relatively new concept for most BOBLME countries. Therefore, the focus has been to (provide) training on EAFM and the project has developed a comprehensive EAFM training package with partners".
- 156 Substantial resources were deployed for EAFM/CCRF training through collaboration with other bodies, including SEAFDEC, NOAA, Coral Triangle Initiative/CTSP, USAID and FAO. IMA International supported training materials, and pilots in Malaysia tested a comprehensive set of support materials. Thirteen training events with a total of 418 participants were held in five countries. Additional training on CCRF was delivered in collaboration with BOBP-IGO, and on "Fishery Capacity Assessment" with the Commonwealth Scientific and Industrial Research Organization (CSIRO).

- 157 **Analysis:** The EAFM training materials are very good, and the evaluation received positive feedback about the training delivered from many stakeholders. The basic principles are relatively simple. Most are already explicit in the CCRF and its supporting documents, and developed more formally in frameworks such as the MSC assessment process or the associated guidance for development of Fisheries Improvement Plans. The training materials note that “the key course resources, such as EAFM guidelines, were primarily written by scientists from developed countries so they are not always directly applicable to course participants” and that “there is no set form or shape for EAFM because it is country, context and culture specific”. Despite this proviso, it is evident that the EAFM training was not linked to and used to reinforce the project’s more direct efforts to facilitate improved management of fisheries (as reviewed above under sub-Components 2.1 CBICM, 2.4 Co-CHM, 3.2 MPAs, and 2.3 Co-FM). This includes the extensive work on local fishing community participation in co-management facilitated mainly by ICSF. The evaluation considers this lack of connection and immediate practical application (i.e. experiential learning) to be a significant weakness of the project’s belated strategy to focus on EAFM training.
- 158 Excess capacity in fishing is a global phenomenon and has been recognised for many years as the key causal factor behind the over-exploitation of marine resources in the BOBLME. Developing management interventions to reduce or limit capacity needs to be a central objective for any effective EAFM-based fishery management plan. This is not easy and requires tailored solutions for different fisheries. The evaluation found that it was a mistake to give up on developing the target fishery management plans (as implied in the rationale for this activity) and to concentrate instead on training. The two could and should have been undertaken in tandem, applied to specific fisheries management issues in the region in order to develop and share practical experiences of its implementation.
- 159 It is also doubtful that the workshop on software packages for capacity assessment, especially for handling large datasets, was a priority for the project, or particularly relevant to the management of complex data-limited, multi-species fisheries, which are typical of the BOBLME. A recent APFIC assessment suggested that most of the fisheries in the BOB are overexploited, some to quite remarkable degrees, with CPUE a fraction of earlier levels. Although the BOBLME countries asked the project to organize this introduction to capacity assessment, it is evident that capacity assessment is not the priority; rather it is more important and urgent to institute innovative and determined initiatives to reduce capacity in the region’s fisheries already known to be over-exploited.
- 160 The evaluation finds that while some of the outputs under this sub-Component have been achieved to some extent, they have not yet led to improvements in collaborative management, nor in fish stocks management, the higher objectives. To reach this point, institutional arrangements for collaborative management would need to be in place, determining effective fishery management policies and plans, and successfully implementing them. For example, the project’s support for improved shark fishery management provides a lesson in the ‘bottom-up’ country-by-country approach. The countries’ varied experiences should now be used to achieve a relevant, effective and enriched region-wide Shark Plan of Action, and each country needs to implement its shark NPoA, in conjunction with the RPoA, and ensure that they are effective.

5.4 Analysis of results: Component 3 – Improved understanding of the BOBLME

- 161 The planned outcome for Component 3 (and sub-Component 3.1) was “Increased understanding of large-scale processes and ecological dynamics and interdependencies characteristic of the BOBLME”. This includes improved regional collaboration, which was the objective of sub-Components 3.2²⁷.
- 162 Oceanography and Meteorology: As for its other regional initiatives, the project established a BOBLME Regional working group for Oceanography, with a first meeting in 2010, in association with an IOGOOS meeting, supported by NOAA. There seem to have been no further meetings of the BOBLME RWG per se. The 2010 meeting prepared an ambitious work plan, most of which does not appear to have been implemented subsequently or has

27 Three Sub-Components were specified in the Project design, but it was recognised during implementation that Sub-Component 3.2 on MPAs needed to be linked with ICM and Critical Habitats work under Component 2.

not been reported by the project. This may be because the various initiatives were taken forward by IGOOS, of which the BOBLME project became a member, and subsequently supported participants at several IGOOS meetings and workshops.

- 163 The project contributed to a number of existing research initiatives (IGOOS, South East Asia Global Ocean Observing System (SEAGOOS), Sustained Indian Ocean Biogeochemistry and Ecosystem Research (SIBER), IOC-WESTPAC), which helped to expand the membership of some programmes in the BOBLME countries. Such relationships strengthened existing regional institutions and initiatives, increased participation, and facilitated exchange and coordination on oceanographic issues in the partner countries. The BOBLME project became a partner of the SIBER, and worked closely with UNESCO-IOC-WESTPAC, whose stated priorities in the region include coral reef restoration, marine endangered species (including river dolphin) and ocean forecasting (surface temperature and acidification). In 2009, IOC-WESTPAC had initiated a pilot project entitled Monsoon Onset Monitoring and its Social and Ecosystem Impact (MOMSEI), as part of its SEAGOOS. The project supported member country participation in the IOC-WESTPAC Summer School on Monsoon Onset Monitoring, with a total of 17 young scientists attending four summer schools. The project also contributed to the refit of instrumentation and launch of an oceanographic buoy by NOAA.
- 164 Ecosystem characterisation: Relatively late in the process (November 2013), the project commissioned the CSIRO to undertake preliminary analysis of sub-regional ecotypes across the BOBLME, which was extended into a regional expert workshop. Significant resources were spent on reviews, modelling, training and workshops, and resulted in identification and mapping of more than 20 ecosystem sub-regions. The ecosystem characterisation work provides an excellent higher level ecological baseline; and was widely regarded as important and useful by stakeholders, including both scientists and managers.
- 165 RV F.Nansen Scientific Cruise: The CSIRO work was complemented to some degree by the scientific work undertaken by the F Nansen research vessel in Myanmar in 2013. Norad provided funding for the programme to augment the BOBLME project in Myanmar. The cruise surveyed the status of the country's marine resources and fisheries, providing essential information for management and sustainability. In addition, it initiated a coral reef monitoring programme.
- 166 **Ecosystem modelling:** The project made a significant effort to develop expertise in the region and improve the quality of existing ecosystem modelling, through a collaboration with University of British Columbia's Sea Around Us Project in the use of ECOPATH with ECOSIM. Activities have included support for participants in a range of training workshops, and preparation of an exploratory ecosystem model of the BOBLME. Although it was hoped that the model will enable exploration of LME fisheries management scenarios and their effects on different species groups, with emphasis on hilsa, Indian mackerel and sharks, the practical benefits seem less certain. While these methods and analyses undoubtedly increase understanding of the dynamics of LMEs and the major fisheries, they are very data hungry and/or associated with high levels of uncertainty, and rarely inform or help to address critical ecosystem management issues, such as overcapacity in fishing, or the wider effects of land-based sources of pollution.
- 167 Other partnerships: The project has developed links and exchanges with both the global LME Consultative Committee and the GEF-supported International Waters Programme, which maintains the substantial learning initiative IW-LEARN, and WorldFish's development of the MPA Atlas. The project also supported a variety of other minor activities, mainly participation in meetings and training exercises:
 - BOBLME-UNESCO-IOC oceanography workshop IIOE-2;
 - IOC Capacity development for Indian Ocean forecasting (Perth, Australia);
 - Workshop on the protection of met-ocean data and tsunami buoys (Chennai);
 - 2012 BOBP-IGO – National Institute of Ocean Technology (NIOT India) regional workshop on best practices for instruments and methods of ocean observation (Chennai);
 - UNEP World Ocean Assessment Workshop (Bangkok);
 - International Coordinators OIS remote sensing training (Hyderabad);
 - 2009 Indian Ocean Cetacean Symposium (MRC, Maldives).

- 168 **Analysis:** Beyond supporting such meetings and training, the project has not been active in large-scale process work, and has contributed relatively little to the objective of improved understanding, or to the ambitious plan from the original RWG meeting. The evaluation found that the project should have balanced its interactions with international organizations and programmes with more sustained efforts to strengthen oceanographic competence within the BOBLME countries. Institutional capacity is particularly weak in Bangladesh and Myanmar, and the project could have done more to strengthen emerging centres of expertise, and ensure that workshop participants and trainees were able to apply their skills within their own policy and institutional structures. Although these activities have not made a significant difference, they will have contributed to a modest increase in general understanding of large-scale oceanographic and ecological processes in the Bay of Bengal. These activities will also have increased the capacity of some national scientists to develop this understanding more fully. Partnering and contributing to other international programmes has been an efficient way for the project to operate, although activities appear to have been opportunistic and ad hoc rather than part of a planned strategy.
- 169 The evaluation found that these activities have not helped to directly address BOBLME's critical marine environment and fisheries issues of overexploitation, habitat degradation or pollution; nor have they informed strategies to address these issues, including the SAP. The ecosystem characterisation work provides an important baseline that may inform some dimensions of fisheries management in the medium-term. Some of the ecological and other modelling is likely to be too expensive and data hungry to be practicable or sustainable. It is to be hoped however that the increase in knowledge of processes and the increased networking resulting from project activities will underpin more effective policy and action to address these issues in the future.
- 170 Collaboration and partnership with other relevant international initiatives has been a central aim and one of the main achievements of the project. Many other project activities under all four components have contributed to improved collaboration, and many evaluation respondents highlighted the success of the project in increasing networking, institutional collaborations, participation in regional activities, communication between scientists and, to a lesser extent, between senior officials and policy makers in the partner countries. The RCU reports issuing nine contracts to BOBP-IGO for work that met their shared objectives, including EAFM, CCRF, Gulf of Mannar; collaboration of BOBP-IGO in the TDA SAP process and the BOBLME PSC; and participation of BOBLME in the BOBP-IGO Technical Advisory Committee and Governing Council. The project worked with SEAFDEC since 2010 mainly on fisheries statistics, mackerel and sharks. The RCU was invited to the SEAFDEC Governing Council, and SEAFDEC was a participant in the BOBLME PSC. SEAFDEC is also a major implementation partner of the EAFM training, and accommodated the EAFM training Coordinator (funded by BOBLME) at the SEAFDEC offices. The project also supported the revival of SACEP, including its work on nutrient pollution and biodiversity strategy development, and its participation in BOBLME PSC meetings and in SAP development.

5.5 Analysis of results: Component 4 – management of ecosystem health and... pollution

- 171 Component 4 includes 4.1 Establishment of an Effective Ecosystem Health Indicator Framework, and 4.2 Coastal Pollution Loading and Water Quality Criteria.

5.5.1 Sub-component 4.1: Ecosystem health indicator framework

- 172 The objective was to be achieved by reviewing existing national practices, and then reaching agreements between the countries on a standard framework and an action plan and timetable for its application region-wide. The project convened a BOBLME Regional working group (RWG) on ecosystem health indicators (2010). The representatives from each BOBLME country except Myanmar met once and reviewed existing practices in ecosystem health and quality monitoring, indicators and standards, and their application in the BOBLME countries, in three broad areas: productivity; fish and fisheries; pollution and ecosystem health. There seems to have been no follow up to this initiative at regional level.

173 **Country initiatives:** Further work was organized at national level in several of the countries:

- In **Bangladesh** in 2010 the project supported a national workshop on Ecosystem Health and Management of Pollution in the Bay of Bengal, which reviewed and reported on issues of marine pollution in Bangladesh waters. These issues include threats from ship-breaking activities; coastal water quality criteria and remedial strategies; marine fisheries and management policies; environmental impacts on coastal hilsa fisheries; and coastal aquaculture. This was followed in 2012 by a Bangladesh National Expert working group meeting on BOBLME Ecosystem Indicators, to collate and review the quality of available data, and form a strategy for developing robust ecosystem assessment protocols.
- India and Malaysia held national workshops on ecosystem health indicators in 2011, and this was followed by a similar workshop in the Maldives in 2012 to assess the available data on productivity, fish and fisheries, and pollution and ecosystem. There seems to have been no agreed strategy towards development of national frameworks or systems, and limited follow-up.

174 Ecosystem health monitoring system: The project has achieved little progress toward the intended outcome of an operational ecosystem health monitoring system with a standard framework of indicators. The RWG was not effective in planning and driving a strategy to establish indicators or targets, nor in developing a collaborative approach between the BOBLME countries. The evaluation found no activities addressing ecosystem health indicators in most of the countries. In some cases, there were inadequate linkages among scientists, policy makers, planners or managers, resulting in limited institutional strengthening or integration of approaches between agencies.

175 **Chilika Lake, India:** In India in 2012 and 2013, the project supported an initiative with the National Centre for Sustainable Coastal Management (National Coordinators SCM) to develop an environmental health report card for Chilika Lake (a brackish water, coastal lake in Orisha State). This was designed as a simplified science communication and management tool for policy makers, managers and local communities. Technical support was provided by the University of Maryland, USA. The exercise was a collaboration between the UNEP-GPA Global Partnership on Nutrient Management activities in Asia, and GEF global foundations for reducing nutrient enrichment and oxygen depletion from land-based pollution, which supports the Global Nutrient Cycle, and Land-Ocean Interactions in the Coastal Zone.

176 The local project provides a good example of strengthening ICM through institutional collaboration between the authorities and the National Coordinators SCM (under the Ministry of Environment Forestry and Climate Change). Support was also provided by the several international programmes. The report card scheme was a success among local managers, and resulted in additional government resources being allocated to the local Chilika Development Authority to carry out the critical tasks identified in the report card. The evaluation is not aware whether there was sufficient local 'capacity transfer' to sustain the scheme at Chilika Lake beyond 2012. If it has not been done, it would be valuable for the project and the National Coordinators SCM to evaluate this application of the report card mechanism and develop it into a demonstration, which can be replicated in India and other BOBLME countries.

5.5.2 Sub-component 4.2: Coastal pollution loading and water quality criteria

177 The Expected Result from Sub-Component 4.2 was "A strategy and action plan for the implementation of a regional pollution monitoring and management programme". The project convened a 2010 Regional working group (RWG) on coastal pollution to devise an initial plan of work. A review of coastal pollution issues was then undertaken in each of the eight countries, producing a useful set of thorough and coherent country reports (2011).

178 In 2012 the project convened the regional SAP planning workshop for the theme Pollution and Water Quality, which identified actions to address the proposed seven categories²⁸ of pollutants.

28 Sewage-borne pathogens and organic load; Solid waste/marine litter; Increasing nutrient inputs; Oil pollution; Persistent organic pollutants and Persistent toxic substances; Sedimentation; Heavy metals.

179 In 2013 SACEP was the project's implementing partner in Controlling Nutrient Loading and Eutrophication of Coastal Waters of the South Asian Seas Region, with technical support from UNEP-GPA. This produced a scoping study, which built on the 2011 country reports and led to a major validation and synthesis workshop in 2014. A modelling study on Understanding Nutrient Loading and Sources in the BOBLME was undertaken in 2014 by the International Geosphere Biosphere Programme, under the UNEP TWAP Project. During this study, a group of Swedish, Dutch and American scientists applied the Global NEWS model, which uses a set of standard parameters relating nutrient inputs to watersheds, climate, hydrology and human activity. The modelling predicted potential changes under future scenarios, including, for example, the likelihood of eutrophication.

180 *Country studies*

- **Myanmar:** In 2011, the project supported a study on "Some Physicochemical Properties of Sea Water in Tanintharyi Coastal Zone, Myanmar", which compared water quality with ASEAN standards. In 2015, the project facilitated and supported an assessment of Marine Pollution and Water Quality Monitoring in Myanmar, conducted by the Norwegian water research agency (NIVA), which focused on improving the country's knowledge base and capacity to address marine pollution and water quality monitoring issues. This work was particularly relevant and useful, given the limitations of existing water quality management systems in Myanmar. Technical experts from NIVA and University of Yangon's Department of Chemistry analysed Myanmar's most important capacity development needs to manage marine pollution monitoring and control.
- **Bangladesh:** In 2013/14, the project supported an international research project, involving the University of Chittagong, RMIT Australia and City University Hong Kong, designed to deploy and test "artificial mussels" as a useful pollution (heavy metal) monitoring device, and to identify sources of pollutants. The devices were successfully tested in four different river systems in Bangladesh. They identified major sources of pollution and demonstrated seasonal variations.
- **Thailand:** A Thai study was supported in 2014 to survey heavy metal contaminants in ray and shark products. The study report is only available in Thai at present, and was not reviewed by the evaluation.

181 **Analysis:** Despite the comprehensive regional and national assessments done in 2002-2004²⁹ and 2010-2014, involving all the BOBLME countries, little progress has been achieved over the past six years toward developing a regional strategy and action plan on pollution, or even sub-regional strategies, apart from the lengthy lists of actions under the Pollution Theme of the SAP document. As discussed under sub-Component 1.4 on the SAP plan, these do not constitute a set of strategic actions for managing or monitoring pollution, either in a country or for the region. It seems highly unlikely that the real object of this work – a BOBLME Regional Pollution Monitoring and Management Programme – will be supported and established in the foreseeable future.

182 An initial regional list of pollution hotspots, which was mentioned as important by several stakeholders, seems to have been the only specific result achieved. The partnership with SACEP was significant (refer to sub-Component 3.3 on Regional Collaboration), but does not seem to have catalysed much forward movement. The project subsequently signed a partnership contract with UNEP-GPA to undertake a programme of work. This included the successful Chilika Lake health card initiative, but failed with regard to the revision and strengthening of the GPA National Plans of Action (to which countries had signed on by being GPA countries). The evaluation found that the lack of progress (beyond academic studies) to strengthen strategy, policy and institutional arrangements may have been related to countries' Ministries of Environment not being engaged satisfactorily. This was evident from the general perception of BOBLME as a "fisheries" programme.

29 Assessment of coastal pollution and water quality issues in the BOBLME countries was part of the work of the PDF phase of the BOBLME initiative, which produced the initial TDA in 2004 and the current Project Document. This work included a substantial review of land-based sources of pollution of the region's coastal and marine waters, including status and trends, identification of priority common and transboundary issues facing the countries; and proposed actions to address the most significant problems (Kay 2004).

6. Analysis by evaluation criteria

183 This section presents an analysis of the BOBLME project against the standard series of evaluation criteria: Relevance, Efficiency, Effectiveness, Sustainability and Impact.

6.1 Relevance

184 FAO was the relevant lead agency for the project because of its focus on facilitating improved fisheries management, including through promotion of the CCRF and EAFM. The significance of the BOBLME project for the eight countries was enhanced by FAO being the project's executing agency, due to the agency's record and credibility in each of the countries and its history of engagement in the region.

185 The project presented a significant opportunity for FAO to strengthen its engagement and programming of fisheries and marine work in the BOBLME countries. However, it is evident that the organization has not made the project sufficiently relevant to any of its seven BOBLME country offices or programmes; the offices and programme staff have little ownership or understanding of the "regional" project, and were not able to make significant use of the project in developing aspects of their work or implementing their country programmes or projects. Insufficient effort appears to have been made to identify or establish linkages among the current FAO Country Programming Frameworks, the BOBLME project logical framework, and the future BOBLME SAP, even though they are all potentially complementary.

186 ***Relevance to the eight participating countries:*** The major objectives of the BOBLME project are highly relevant to all eight countries: to secure the health of the coastal and marine ecosystems in the Bay of Bengal region, as the essential foundation for sustaining fisheries, livelihoods and food security. Two key project targets were also openly acknowledged as priority institutional issues for each national government, namely to build cooperation between the fisheries and environment sectors, and to strengthen collaboration in marine environmental and fisheries matters across the region. The project offered opportunities for countries to address (both nationally and through improved regional collaborations) the full range of coastal and marine resource management, fisheries and pollution issues, and associated social and economic issues. The project was intended to enable the countries to strengthen national policies in line with their international commitments, including to the Rio conventions, the Millennium Development Goals and their successor, the Sustainable Development Goals.

187 Relevance to individual countries was reduced also by the misguided emphasis on transboundary issues and the need for multilateral actions to address them, which was the GEF agenda. This approach detracted from the substantial amounts of local and national work being done, and the experiences gained across many of the issues in individual countries. An important consideration is that the different priority issues identified vary in their relevance to the individual BOBLME countries. The project could have done more to enhance relevance by enabling individual countries to take the lead in analysing and developing strategies to tackle specific issues.

188 The relevance of the BOBLME project to the individual countries would have been enhanced by focusing more on national system capacity development and national programming. At a basic level, the project could have enabled countries to link BOBLME project activities to other related projects within the country. Furthermore, the project-sponsored training could have been better aligned with the countries' needs for institutional strengthening and reform in order to develop more effective systems. More broadly, the project could have enabled countries to connect and integrate their lists of national actions and preliminary national SAPs into their existing national and sectoral strategies, as well as their national systems for development planning and budgeting.

6.2 Efficiency

- 189 The BOBLME project has focused largely on processes, and has been efficient in organizing and facilitating activities to drive this work. This is especially evident in the project's preparation of the TDA in 2010-2011, and formulation of the SAP in 2012-2013. However, the evaluation is critical of the overall inefficiency of the project in organizing the TDA and SAP as separate sequential processes, rather than more flexibly as parallel and more closely integrated exercises.
- 190 The project was administered with a high degree of efficiency, and led with remarkable diligence and skill by the small RCU. An efficient mode of delivery was chosen for the great majority of project activities; large numbers of such contracts were implemented, with results produced and reports returned directly to the RCU, for review and entry into a well-organized project activity database. Through this mechanism, the project RCU organized collaboration efficiently with a large number of individual providers in a diverse network of international, regional and national research organizations, GOs, NGOs and consultants. The downside of this efficiency is that ownership and responsibility for the programme tends to remain with the RCU rather than being shared, which inhibits rather than fosters a partnership approach.
- 191 Management of finances: The project's highly efficient administration was constrained by FAO's financial management, particularly in the following two ways. First, although project funding was provided by several different sources (GEF, donors, national governments), it was not under RCU's control as an integrated or unified budget, and national funds were administered by the national government agencies. It would have been more efficient and effective to have established a single fully-integrated budget, under the control of the FAO/ RCU and Budget Holder plus National Coordinators and national budget holders. This would have necessitated additional capacity in each country, which could have been met through a series of eight national (sub-) project budgets, each integrating the funds available from the various sources for project actions in that country, and linked with an integrated budget for the regional component of the project.
- 192 The second issue was that project was not able to apply results-based budgeting, which meant that at no point was a budget prepared and used to execute each specific result, output or outcome under the project plan. FAO's financial accounting system uses the conventional sets of line items to manage its projects' budget planning and expenditure monitoring. Apart from identifying total funds and expenditures on each of the project's major components, the system does not allow the project management to manage activities and funds together, to achieve the required results. It does not allow project management (or evaluators) to monitor and analyse the funds applied to and spent on achieving the planned outputs and outcomes. One consequence of this systemic problem is that there are no data available on the cost of any of the project's pilot strategies activities. The accounting system can inform the manager only about expenditures on a line item, such as a review workshop, training exercise or travel.
- 193 The BOBLME project sponsored the generation and collation of considerable amounts of technical information, through numerous reviews, analyses, workshops and training courses. The accumulated body of electronic information has been efficiently organized into a permanent resource that is readily accessible by any connected user. (An outstanding task is to establish appropriate national 'hubs' as the long-term institutional home for such a resource, in conjunction perhaps with FAO country offices and RAP, rather than relying on continuation of a BOBLME RCU or similar body).

6.3 Effectiveness

- 194 The BOBLME project made a significant contribution to increasing knowledge and understanding of the prevailing issues affecting the countries' coastal and marine ecosystems and fisheries, and their underlying causes. This was achieved especially through the preparation of the TDA, both in the earlier PDF and during the current project. The series of substantial reviews and studies also produced high quality results available in attractive and accessible form, in paper versions and in the project's online catalogue, including the

MPA Atlas and interactive map. Similarly the Ecosystem Characterisation mapping done by CSIRO was useful and effective.

- 195 The project worked diligently to strengthen collaboration across the region and among countries, institutions and individual specialists. It succeeded in orchestrating a considerable enhancement of interactions and exchanges of information and ideas. However, it is unlikely that lasting institutional change has been achieved by only individual capacity development activities, either within countries or in sub-regional or wider arrangements. Regional technical working groups were the principal mechanism used to bring different interests together to address common issues, but they have generally not worked or been continued. There does not appear to have been significant progress made in bringing fisheries and environmental interests together (e.g. in joint actions or projects), which could have been driven by the countries' paired delegates to the PSC.
- 196 It is evident that some of the local and national pilot activities supported by the project were reasonably effective in producing locally useful results, including increased local and national protection for sharks in at least some of the countries; improved management of coral reef and seagrass sites in the Gulf of Mannar; improved monitoring of ecosystem health, and probably improved management of human use activities, at Chilika Lake, India.
- 197 Notwithstanding these results and despite its relevance and highly efficient delivery, the evaluation found that the BOBLME project was generally ineffective in achieving the substantive results that were expected. The project focused largely on processes, which contributed to improved understanding of the issues, but seldom progressed far enough to test, prove and demonstrate solutions to them. Poor design and in particular poorly defined objectives contributed to reduced effectiveness. Few of the planned outcomes, outputs, indicators or expected results were specified clearly, and as a consequence activities were not planned or executed with a clear view of what was required or expected.
- 198 The project's Component 2 (and C.3.2 and C.4) was intended to demonstrate effective strategies for tackling the range of priority issues identified, including in coastal and marine resources, environment, fisheries and/or pollution management. The intended strategy was to follow a process of reviews, planning, piloting and evaluating a spectrum of strategies through a variety of models (e.g. CBICM, EAFM, MPA) While good reviews were done in each of the fields, in most cases the project has not progressed sufficiently beyond the review or planning stage. The project has not been effective in introducing or developing suitable institutional and financing arrangements for managing the implementation of actions, including national, multilateral systems for governing and management of the SAP or national SAPs, as well as implementation of the proposed strategies integrated with their national planning and budgeting systems. A key part of the problem seems to have been organizing activities in countries to pilot and/or demonstrate useful strategies or best practices. This may have been due in part to the project management's focus on the process of formulating the SAP, instead of the need to complete and get useful results from all of the pilot actions, which were essential to inform the SAP.

6.4 Sustainability

- 199 The purpose of the project was to establish a collaborative management programme that would address the region's transboundary coastal and marine environment and fisheries issues, which would be sustained in the long-term by the countries themselves through a permanent regional/ multilateral institutional and financing mechanism. It is evident that these outcomes were not fully achieved by the end of the project. The main result to be taken forward is a plan for a next phase programme. The plan proposes that with further planning and agreement a regional programme and institutional mechanism could be established, as a further donor-funded project.
- 200 Some activities are likely to be continued beyond the project by other programmes and agencies, international and national GOs and NGOs. These include the training activities in EAFM and science communication; fisheries policy work; shark conservation; Mangroves for the Future; management of Myeik Archipelago; and the Global SocMon (socio-economic monitoring) initiative in South Asia and South East Asia.

- 201 For the BOBLME countries to sustain many of the regional activities implemented under the current project, further external project funding is likely to be required. There was no regional institution or capacity developed that will be sustained beyond the project, apart from knowledge and information systems that could be sustained by an international agency or programme, including FAO RAP, and of course individuals' knowledge or skills. The project did not achieve any convincing results in collaborative management of transboundary issues (e.g. multilateral planning or monitoring of a fishery, critical habitat or pollutant) that might have led to their wider adoption and replication. A key sustainability question is whether countries will continue to apply the practices piloted or lessons learned. Institutional arrangements and planning processes applied in the project (i.e. technical working groups, studies and training) appear unlikely to have resulted in changes to national systems or procedures that could be sustained. These activities were not designed to address institutional or systemic capacity issues; many involved either national scientists and research agencies or international NGOs, and did not have satisfactory connections with state management agencies responsible for pollution control, fisheries, or biodiversity conservation.
- 202 Nevertheless, there were many results which national stakeholders were interested in seeing sustained or becoming established or replicated. Examples include lessons learned through the shark NPoA work; participatory planning and stakeholder consultative processes; ecosystem mapping and modelling; and the concepts underpinning ecological sustainability, including community-based and co-management, and the ecosystem approach to fisheries management. While some countries may lack the technical capacities to develop some programmes, most of the BOBLME countries should be able to sustain the programmes most relevant to their local context.
- 203 Sustainability of the BOBLME programme depends largely upon what the programme would involve and require in the long-term, with what costs and borne by whom. The BOBLME countries have not made satisfactory progress towards defining institutional and financing arrangements for a regional collaborative mechanism that they would each support. It is evident that there has been insufficient analysis of potential alternative arrangements to enable the countries to determine their preferred solution for a future BOBLME programme.
- 204 The completed 2015 SAP presents an outline plan for the future BOBLME collaborative management programme, with the following proposed institutional and financing arrangements:
- The core of the programme would be the countries' own marine environment and fisheries management programmes. Of these, fisheries management alone is estimated to cost governments more than USD 230 million (2015 SAP). The evaluation concluded that the current combined total budget may be around USD 0.5 billion per year.
 - The proposed regional programme of activities listed in the SAP would be in addition and complementary to the countries' programmes, and would cost around USD 7 million per year (USD 48 million for the first seven years). These incremental costs are proposed to be covered by a further grant from GEF and/or other donors. The regional programme is envisaged as an RCU-type of office providing coordination and support, costing less than USD 1 million a year and delivering four regional projects, with incremental costs totalling around USD 6 million per year:

Fisheries	US\$ 1.4 million per year
Critical Marine Habitats (and ETP ³⁰ Species)	US\$ <2 million
Critical Transboundary Areas ³¹	US\$ 0.6 million
Marine Pollution	US\$ >2 million
 - The SAP also provides a conservative estimate for the total value of marine and coastal ecosystem services in the BOBLME of USD 72 billion per year, including income from fisheries, aquaculture and tourism of USD 32.4 billion, USD 9.4 billion, and USD 18.7 billion respectively.
- 205 These figures suggest that the countries' expenditure on management of the marine environment and fisheries is roughly 7 percent of the income derived from them (USD 0.230/32.4 billion). Long-term financial sustainability of the BOBLME programme

30 Endangered, Threatened and/or Protected species

31 "Transboundary Areas" means areas straddling the borders of two or more countries.

would be achieved if an adequate portion of the revenue from fisheries, aquaculture, tourism and other relevant resource-based industries was channelled into effective management programmes by the countries, which could be implemented primarily domestically and to a lesser extent in collaboration.

- 206 Shortcomings of the 2015 SAP plan include its lack of specific detail on (i) the structure and contents of the countries' current or future domestic programmes (estimated to be worth USD 0.5 billion per year); and (ii) the proposed four regional projects. Regarding the first point, the BOBLME SAP was intended to comprise a national SAP for each of the eight countries, but few of the countries appear to have progressed beyond endorsing generic lists of several hundred possible national actions. These are not organized into any form of strategy or programme aligned to any of the SAP's proposed high level objectives. The project has an outstanding task to enable each of the countries to prepare a national SAP, aligned to the country's planned programmes for marine environment and fisheries management.
- 207 Regarding second SAP shortcoming, the four projects are intended to link and support the components of the eight national programmes. By the end of the current project, detailed plans and costings should be prepared for each of the envisaged projects, indicating clearly how they would operate in conjunction with the relevant components of the countries' programmes.

6.5 Impact

- 208 The BOBLME project was intended to have indirect impacts on the critical issues affecting the health and productivity of the region's coastal and marine environments and fisheries, and the coastal communities whose livelihoods and food security depend on these resources. Examples in the project document include strengthening community-based approaches to integrated coastal resources management; developing collaborative management of fisheries through inter-agency and multilateral, ecosystem-based approaches; conserving vulnerable coastal marine habitats and associated endangered marine wildlife; and increasing alternative livelihood opportunities for coastal and marine communities.
- 209 It is likely that the project's main impacts were on the individual national participants in the sponsored training exercises and consultative reviews and planning workshops. Although the approach adopted has not produced institutional change, these individuals have been exposed to new ideas and will have acquired knowledge and skills that enable them to behave and work more efficiently and effectively.
- 210 It is evident that the current project has had limited impact on policy settings, institutional arrangements, planning and management approaches, or behaviours and practices which govern the target issues. For a variety of reasons, the project has not sufficiently improved either the enabling environment or the issues themselves. One factor in this regard was the overemphasis on the transboundary nature of the issues (not recognising that most of the issues are common to multiple locations, rather than transboundary). Another issue was the preoccupation with finding regional or sub-regional solutions following the GEF LME approach. As a result, there has been inadequate support for reviewing and learning from local and national solutions as a first step.

6.6 Cross-cutting criteria

6.6.1 Gender equality

- 211 The objectives of the BOBLME project are clearly highly relevant to both men and women engaged in coastal and marine resource use activities in each of the eight countries. In the BOBLME countries as elsewhere, in many fishing communities men and women have distinct roles which exposes them to different sets of prevailing issues. Moreover, female fishers of all ages and older fishermen tend to predominate in the poorer or more marginal fishing activities. The project plan was to systematically analyse all of these issues and their underlying causes, and to devise and organize effective and appropriate strategies for addressing them.

- 212 The MTE in 2012 pointed out that gender was not given any explicit attention in either the project document or in the TDA that was being completed at that time. Appropriately, the MTE included a strong recommendation “that the project pay more attention to women’s issues... including in training and capacity development initiatives and explicitly in the SAP”. It also urged incorporation of gender considerations in the revised TDA and its root cause analysis. The formal response to the MTE announced that a gender analysis was being organized.
- 213 A gender analysis was commissioned by the project in 2012 to review the project documents and the countries’ existing policies. The audit was applied to the main project document (2008) and to the two volumes of the TDA. A useful report was prepared called Mainstreaming Gender in the BOBLME project (BOBLME-2012-Socioec-02). The conclusion was similar to the MTE in that the documents largely ignored all aspects of gender relations and equality, including in the identification of beneficiaries for the project’s planned activities. The audit provided recommendations on how gender issues could be addressed more fully in the SAP. The evaluation found that the completed 2015 SAP does include explicit references to gender in a few of the proposed actions (e.g. Regional 4A.7, 4B.2; National 4A.7).
- 214 The 2012 gender audit also addressed the following set of recommendations to the BOBLME country participants:
- Commissioning a gender-sensitive review of legislation and regulatory frameworks in the BOBLME partner countries;
 - Mainstreaming of gender in the NAPs, mirroring what has been proposed to mainstream gender in the SAP;
 - Addressing gender-disaggregated data collection as soon as possible;
 - Ensuring the continuous provision of gender inputs throughout the project;
 - Strengthening the participatory processes undertaken so far by the project;
 - Maintaining a focus on gender issues and inequality;
 - Supporting gender training and capacity development at all levels, beyond the life of the project.
- 215 The commissioned audit in 2012 may have been more effective if it had been undertaken as an integral part of the TDA preparation process, which was under way at the same time. Such a formative evaluation could have been used directly to strengthen the TDA with respect to addressing gender issues. In this regard also it would have been useful if the development and implementation of the TDA and SAP, incorporating a gender appraisal process, had been established and subsequently managed as a continual dynamic process, with say a five-year cycle of review and further development.
- 216 The evaluation considers that the work done by the ICSF later in the project was well-organized and particularly valuable in exploring, exposing and aiming to rectify issues of inequality, including gender and resource access; opportunities for co-management between government authorities and local fisher groups; and human rights, justice and equality for migrant workers in the fishing industry. In contrast to the MTE finding that male attendees predominated the project’s workshops and training exercises, an analysis of the participation at a series of 20 fisheries co-management workshops, organized by ICSF with project support, indicated that overall women and men were about equally represented.

6.6.2 Capacity development

- 217 Capacity development was, appropriately, a core strategy of the BOBLME project, and significant investment has been made in a wide range of capacity development activities. The project has worked on each of the main dimensions of capacity, but perhaps with inadequate regard to a structured capacity development model or framework. Thus the framework for the SAP plan for each theme is based on four aspects of capacity

development³², but does not recognize that the listed sets of actions must be implemented strategically together (i.e. in a coherent plan) in order to develop capacities at institutional and system levels to manage the target issues. As commented on in several parts of the report, there has also been a lack of self-analysis of the methods and mechanisms piloted and experiences gained, which has limited the lessons able to be drawn and applied in other or future parts of the programme.

- 218 The main portion of the project's capacity development efforts targeted individuals, mainly through the provision of training opportunities or more general awareness raising. A significant number of quality technical trainings were delivered under each of the project components, as reviewed in several parts of this report. Major training topics included EAFM, ICM, and science communication. The evaluation found that while the main mode of training adopted is intensive and cost-efficient, it is usually conducted outside the individuals' regular work situation and environment. It would have been more effective to deliberately connect the relevant training activities to address capacity gaps in each of the planning and management actions piloted or tested under Component 2.
- 219 One of the most important contributions has been in the area of increasing awareness, information and knowledge about the BOBLME, including its ecological, social and economic characteristics and processes. The project outputs include a series of technical reviews on the major themes and issues; a substantial catalogue of publications; and online resources including a WorldFish ReefBase MPA Atlas.
- 220 It is evident that the project was not effective in strengthening institutional arrangements and functions, including in law and policy development (refer to sub-Components 1.3, 2.2); nor did it succeed at the broader scale of developing systemic capacity. Key project objectives were to strengthen management systems for coastal and marine environments, fisheries and pollution at the national, regional and sub-regional levels, primarily by developing the national SAPs and regional SAP, as well as through appropriate institutional, policy and financing frameworks. It is evident that none of the countries designed or developed mechanisms for managing a BOBLME national SAP, or the regional SAP. Furthermore, there is no evidence that national governments have designed institutional linkages between the BOBLME SAP and existing national systems. The limited range of mechanisms used to pilot institutional strengthening (working groups, task forces, the PSC) have generally not produced convincing results or been sustained.

6.6.3 Partnerships and alliances

- 221 Given the lack of enthusiasm (and possibly the lack of rationale) for a BOBLME region management body, a key requirement of the project was to forge effective partnerships with and among existing sub-regional or supra-regional governance, and to coordinate research and monitoring bodies and organizations. The project has been relatively successful in this regard, and has been active in facilitating country participation in regional organizations, as well as bringing together different organizations working at different levels or across different sub-regions to address critical issues. This was done both in the development of the project, which attracted significant additional financing to complement the GEF and national government funds, and throughout project implementation, under all components and especially C.3.
- 222 In order to improve coordination and enhance impacts, the project convened a 2012 meeting with other agencies and programmes operating in the Bay of Bengal, including SEAFDEC, ASEAN, SAARC, ACIAR, WFC, MFF, IUCN, BOBP-IGO, UNESCO-IOC, NOAA, World Bank, FAO, UNEP, UNDP, ADB, SIDA, and Norad. This meeting led to a range of collaborations, and to partners being invited to participate in the PSC meeting. For example, sub-component 4.2 (pollution) was largely implemented in partnership with UNEP. The project also helped support FAO programmes, including IOTC, EAF Nansen, statistics, sharks, MPA guidelines and SSF guidelines. The SAP plan also identified 25 organizations interested in contributing to future SAP implementations. On the other hand, it is evident that the project was not

32 Capacity Development model: A. to increase knowledge and understanding; B. to strengthen policy and institutions; C. to develop the skills of those with power to facilitate or enforce improved management; and D. to strengthen collaboration between the various government departments, agencies and other players.

considered by FAO as a potential collaborating programme, with other programmes and two-way linkages to the current FAO Country Programming Frameworks, even though they are potentially highly complementary (refer to Chapter 6 on Relevance).

- 223 The project organized collaboration efficiently with a large number of individual providers, in a diverse network of international, regional and national academic and research organizations and consultants. However, these flexible and ad hoc sub-contractual arrangements were not partnerships, and tended to detract from or undermine the establishment of sustainable genuine partnerships with regional and national institutions. Achieving partnerships would have been more effective if a strategic approach had been taken. This should have involved identifying key national and regional organizations that could work together to address specific critical issues, as well as facilitating effective partnership mechanisms between them in order to improve management at national and/or regional levels.

7. Evaluation ratings

224 For the purpose of reporting comparable results to GEF, and contributing to the GEF programme learning processes (IWLearn), the evaluation rated the project's success based on the GEF six-point scale system: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U), and Highly Unsatisfactory (HU) (as detailed in the evaluation ToRs).

Box 2: BOBLME evaluation ratings

Item	Rating	Comments
Achievement of objectives	MS	The majority of higher objectives were not achieved in full.
Attainment of outputs and activities	S	The project organized a significant number of activities which produced high quality outputs.
Progress towards meeting GEF-4 focal area priorities/objectives ³³	S S	Progress towards establishing mechanisms for cooperation and collaboration between states toward the shared goal of a healthy BOBLME has been satisfactory. Progress toward sustaining fish stocks and associated biodiversity has been satisfactory.
Cost-effectiveness	S	The project has been implemented with considerable regard for efficiency and attentiveness to process.
Impact	MS	There has been limited lasting impact on policy settings, institutional arrangements, planning and management approaches, or the behaviours and practices which govern the target issues.
Risk and risk management	S	The majority of risks identified were satisfactorily anticipated and avoided or addressed. The need to engage and confer ownership of the initiative to the national governments was underestimated and compromised progress in this essential area.
Sustainability	MS	The project has not made satisfactory progress towards establishing a collaborative BOBLME management programme that will be sustained primarily by the countries themselves.
Overall rating	S	

³³ GEF-4 International Waters

Strategic Objective 1. *To foster international, multi-state cooperation on priority transboundary water concerns through more comprehensive, ecosystem-based approaches to management.*

Strategic Priority 1 – *restoring and sustaining coastal and marine fish stocks and associated biological diversity.*

8. Conclusions, recommendations and lessons learned

8.1 Conclusions

8.1.1 The nature of capacity development

225 The project employed a systematic approach for capacity needs assessment. It used reviews, regional workshops, working group meetings, National Coordinators meetings, the PSC meeting and partners meeting (e.g. APFIC) to identify area-specific capacity development needs. However, that was not enough to address the various dimensions of capacity development in a systematic approach. Improving natural resource management is a great challenge (locally and especially nationally), which requires sustained and concerted efforts to improve the enabling environment through increased knowledge and understanding; strengthened policy and institutions; development of skills in facilitating and enforcing improved management; and improving collaboration among the various government agencies and resource users. These key dimensions of capacity development must be addressed strategically in relation to the priority issues identified at national level for the BOBLME. Mutual learning leading to coordinated action at regional level should run in parallel with national capacity development in order to address these priority issues.

226 There were many excellent initiatives in individual training, research, demonstration and collaboration, but there is little evidence that they have contributed to a strategic and mutually reinforcing process to increase capacity for the improved management of coastal and marine resources within the BOBLME. Nor have they significantly informed the strategic content of the SAP. These initiatives were primarily opportunistic and ad hoc, driven by the availability of funds rather than forming a well-planned set of activities designed to address critical weaknesses in policies, plans, legislation, institutions and management/regulatory systems.

227 There was a general lack of focus and consistency in the facilitation, support and leadership driving specific initiatives, and in the development of capacities to generate results and impact. Although many initiatives appear to have started well (such as the Hilsa working group), few have achieved the expected results. Plenty of guidance and lessons were produced, but longer term support and an exchange of experiences in implementing this guidance were relatively limited.

8.1.2 Knowledge

228 The project was relatively successful in assimilating existing knowledge, and in funding new knowledge-gathering initiatives. However, the evaluation found that the emphasis on knowledge was excessive relative to its importance for improved management. This compromised the focus on developing effective institutions and management systems that can use knowledge to deliver better management. Knowledge or monitoring without a purpose is of limited value. This unbalanced approach is not unusual – institutions and management systems are difficult to strengthen and require a substantial amount of time, whereas a consultant can generate a useful knowledge based synthesis report in a couple of months.

229 Furthermore, some of the science-based initiatives are unnecessarily sophisticated relative to the needs of management. Although ecosystem modelling is challenging and fascinating, during the time it takes to create the models, significant components of the ecosystem are degrading rapidly. Management responses are urgently needed, and while these models may be effective at raising awareness among the scientific community, they rarely inform management strategy or underpin effective action. They are also expensive and data hungry, especially if sufficient data is to be gathered to make them useful predictive tools for management purposes.

- 230 A more basic issue for the BOBLME initiative is that the process of comprehensive TDA coupled with additional detailed studies is too slow. The critical issues in the BOBLME are worse than they were 10 years ago, and the challenges all the greater. Improved management systems, however rough and ready, must be put in place at local and national levels, and where necessary regional level, in line with the precautionary principle. Short-term measures can be adapted and refined over time.

8.1.3 Natural resource management systems

- 231 The project supported a range of training, pilot and facilitating initiatives relating to EAFM, CB-ICM, CHM, CB-FM, MPAs and LMMAs. These approaches have a great deal in common, including, for example the need for:

- Community participation and stakeholder engagement;
- Effective institutions capable of working together to implement a management system to deliver the management plan, and adapt it according to practical experience over time;
- Developing a shared understanding of issues and natural resource values, and the importance of the wider ecosystem in sustaining these values;
- Use of best available scientific and resource-user knowledge;
- Awareness and understanding of the possible trade-offs between different objectives and between short-, medium- and long-term costs and benefits;
- Well-developed management plans incorporating agreed objectives, indicators, targets or milestones, baselines or reference levels, monitoring systems, management response procedures, and clear institutional responsibilities;
- Integration among different government departments and agencies, levels of government, and representative organizations.

- 232 The evaluation found that the BOBLME project missed important opportunities to institutionalise a simplified “CBICM–EAFM–LMMA + pollution control” management mechanism by i) not working satisfactorily to strengthen and coordinate existing institutions with a remit to manage coastal and marine resources; and ii) failing to target and sustain efforts to address specific known cases of fisheries, habitat, and pollution issues.

- 233 It was appropriate that the project did not support further pilot work when sufficient work had already been done, and instead, pulled together lessons and best practice guidelines, as well as investing in demonstration sites and case studies where they could be showcased and communicated. For example, the work done by Pondyca in Puducherry, shared with the National Centre for Sustainable Coastal Management, and FFI’s impressive results in Myanmar. The parallel step needed is engagement of government or local governance systems, to extend and develop management systems appropriate to particular contexts and needs, employing the key principles and approaches of effective and sustainable management systems as summarized above. The challenge is to institutionalise the basic approaches locally and nationally. Experiences can be shared subsequently with neighbouring jurisdictions and across the region, while recognizing that solutions will be different according to context.

8.1.4 Regional and national institutions

- 234 Throughout the BOBLME project the transboundary nature of issues and the priority need for regional management were stressed, whereas the evaluation concluded that a more appropriate and effective strategy would have been to emphasise first national, then sub-regional and regional institutional arrangements and actions – any or all of which may be needed to deal with the different issues. Whereas BOBLME regional actions by themselves are not sufficient, and in many cases are not essential, national actions are an essential foundation upon which additional benefits may be gained from concerted and collaborative actions between countries. The overemphasis on establishing regional institutional arrangements has resulted in insufficient attention to national and local capacities, and to piloting and demonstrating relevant and effective local and national management strategies for the priority issues. A more relevant and more effective strategy for the BOBLME project would have been to support a range of incremental changes in

addressing local and national issues, and to build regional collaborations and synergies as a secondary or subsequent step.

- 235 Throughout the project plan and implementation, especially in relation to Component 1, there was an assumption that, because there are transboundary dimensions to the three identified priority issues of over-exploitation of living resources, habitat degradation and pollution, there is a need for a new regional institution to coordinate action in respect to these issues. The evaluation considers this to be a misconception. The boundaries of the BOBLME are largely arbitrary from an ecological perspective, and encompass countries with diverse interests, dependencies, cultures, governance systems and states of development. There are already many sub-regional and regional institutions, some with a clear mandate relating to critical issues (e.g. SEAFDEC, BOBP-IGO, IOTC and APFIC with regard to fisheries; SACEP for the environment; and ASEAN for water quality standards). The evaluation found that not enough attention was paid to the potential roles of these various bodies, and indeed to national institutions, in delivering the different elements of the SAP, or in seeking to strengthen these organizations so they could assume an effective implementation role in the project and beyond. There appears to have been no formal and concerted effort to identify and strengthen organizations or groups of organizations to deliver the proposed SAP. Instead, there is a proposed "consortium" to oversee SAP implementation, which is little different from a project steering committee.
- 236 Where a specific mechanism to improve management (e.g. in relation to transboundary fish stocks such as hilsa and Indian mackerel) has been identified, the project's efforts were not consistently applied, and there was not a successful process of institutionalisation. The regional working groups were partially successful, but the outputs required of them (e.g. multilateral plans, or at least some formal agreement on tripartite or multilateral management responsibilities) did not materialize. The evaluation does not underestimate the challenges involved, but nonetheless found that insufficient effort was made to evaluate effectiveness and strengthen these issue-specific and experimental collaborative management mechanisms, and identify a specific role for them in the SAP.
- 237 There was limited ownership of project actions by some important national institutions, most notably, in some countries' Ministry of Environment and implementing agencies. The effective engagement of Ministries of Environment is a precondition for integrating policies and practices across fisheries and environmental governance systems at national and state level. This weakness in the current project has carried through to the SAP, which does not define how national governments' systems will take ownership and provide leadership for SAP implementation.

8.1.5 Project design and management

- 238 The project was poorly designed and the theory of change was not adequately or logically articulated (either in the project document, or through subsequent changes). Furthermore, the project logical framework was inadequately specified, especially with respect to mid-level outputs, and these problems were exacerbated during implementation by the lack of results-based budgeting. It was evident to the evaluation that these weaknesses affected the effectiveness of project actions.
- 239 It is good practice for effective project management (and for monitoring and evaluation) to specify a purposeful, substantive and SMART objective for the project. For the BOBLME project, this central purpose could have been to strengthen collaborative management (of coastal/marine resource management issues), particularly between fisheries and environmental 'sectoral' agencies, as well as among the BOBLME countries. Useful PDO indicators could have measured the extent and types of collaborative management systems and mechanisms achieved; demonstrated appropriate and effective collaborative strategies for resolving priority transboundary environmental problems in the BOBLME; and secured or improved the well-being of coastal communities. The evaluation found that stipulating a more rigorous project purpose in this way would have enabled project managers to focus more effectively on reviewing, piloting and demonstrating strategies for collaborative management (among sectors and countries), thus establishing a stronger foundation for the development of the SAP.

- 240 The effects of poor design were compounded by the ambitious scope of the project. For the three major sets of issues tackled, constraints and solutions across the BOBLME countries are hugely diverse and complex – culturally, politically, institutionally and technically. The evaluation found that the response of the project’s planners and managers to this complexity should have been more strategic, with a focus primarily on strengthening management systems to deliver and prove integrated solutions to critical issues; analyzing and comparing possible interventions and initiatives; assessing the project’s comparative strengths for delivery relative to other national and international agents; and being more attentive to individual countries’ needs and responsive to national priorities.
- 241 The project worked efficiently with regard to funding deadlines and funding opportunities, ensuring that it spent money in a reasonably balanced way across and between components. The priority was to get the TDA and the SAP done, and at the same time commission a wide range of research, training, and knowledge exchange events. Limited attention was given to target institutional strengthening to deliver better longer term management within and between countries. The rationale for this approach was that the latter would be undertaken during the next phase, and that the priority was to increase capacity more generally in order to underpin the future programmes.

8.1.6 The BOBLME SAP and national action plans

- 242 While there were mixed responses on the part of stakeholders to the 2015 SAP plan, the evaluation found it to be generally weak: it does not specify a set of coherent strategic actions (drawn from the experiences of the current project) that will achieve the proposed objectives and targets; there is no logical hierarchy of objectives; and the structure of the plan does not indicate the essential connections between the lists of actions and the high level objectives. To have any chance of being effectively implemented, each of the critical issues and corresponding objectives will require a hierarchy of agreements, standards and management systems, integrated with and delivered through regional, sub-regional and national institutions; and the SAP should be the framework for strengthening or where necessary developing these institutions and governance systems.
- 243 The BOBLME SAP was intended to comprise a national SAP for each of the eight countries, but none of the countries progressed much beyond endorsing generic lists of several hundred possible national actions. These are not organized into any form of strategy or programme aligned to any of the SAP’s proposed high level objectives. The lack of national SAP development in the majority of countries also undermines commitment to and ownership of the whole BOBLME SAP implementation process, and will impede progress of the programme’s next phase.

8.2 Recommendations

Recommendation 1: to RAP and GEF Unit

The evaluation recommends that an additional phase of the BOBLME programme is planned as a series of eight national programmes, with a small regional coordinating mechanism (as opposed to the current project’s focus on establishing a primarily regional programme). Each participating country should be supported to develop its own national programme plan within the broad thematic framework outlined in the BOBLME SAP. This would take the form of a BOBLME National Strategic Action Programme (NSAP). The NSAPs should be developed with a common framework and timetable in order to facilitate the exchange of programme information and joint actions among countries. Each country’s NSAP should be designed as an integral part of the country’s national system, programming and budgeting mechanisms for marine environment, fisheries and pollution management.

Recommendation 2: to RAP and GEF Unit

Under the common goal of a “healthy marine ecosystem and sustainable marine resource use”, each NSAP should be developed in a common three-tiered framework: 1st tier, themes; 2nd tier, thematic strategies; 3rd tier, strategic initiatives. Furthermore, each NSAP should include a gender component.

- The NSAP 1st tier should be based on the three major themes used so far in the BOBLME programme: 1. Marine living resources; 2. Critical habitats; 3. Water quality. (Rather than a 4th theme, it may be more practical and effective to ensure that social and economic considerations are addressed through each of the three sectoral themes).
- The NSAP 2nd tier should comprise a clearly defined and suitable set of thematic strategies, with sub-programmes and outcomes under each theme. The 13 subsidiary objectives (1.1 to 1.4; 2.1 to 2.3; 3.1 to 3.3; 4.1 to 4.3) in the 2015 SAP provide a starting point for identifying these strategies, but each needs to be assessed carefully and perhaps reformed before selection as a 2nd tier strategy.
- The NSAP 3rd tier should identify a set of specific strategic initiatives, including from one to three or more under each strategy. This could be done as a rolling set of strategic initiatives planned and implemented progressively over the life of the programme.

244 ***Strategic initiatives, actions, special projects or campaigns:*** Strategic initiatives are the principal actions for implementation under each NSAP, as well as the regional programme. Each strategic initiative should be planned and managed as a special project or campaign, with a finite time frame and specific planned results; a dedicated manager and team drawn from multiple sector agencies; results-based budgeting; and integral monitoring. The starting point for the design of each strategic initiative should be the lists of actions drawn up by each country for entry in the 2015 SAP plan. Transforming these actions into well-designed strategic initiative plans is a considerable undertaking. Examples of priority strategic initiatives could include an IUU campaign, national whale shark project, or sustainable coral reef fisheries initiative. Strategic initiatives can be designed to contribute under multiple themes and thematic strategies. For example a strategic initiative or special project designed to develop a fully integrated coastal zone management programme at a multiple-use site, such as Chilika Lake or the Gulf of Mannar, would integrate multiple themes and strategies. A special multi-agency team and budget should be assembled to manage each of these strategic initiatives.

Recommendation 3: to RAP and GEF Unit

It is important for each NSAP to be developed in line with the country's planning and management systems, including national development programming and budgeting, and medium-term and annual timetables. The NSAP should be planned as an integral part of the government's programme, linked to the relevant agencies' work plans and budgets, and operate under the appropriate institutional, law, policy and planning framework.

Recommendation 4: to RAP, GEF Unit and relevant country offices

It is recommended for each country to establish a national steering committee for the development and delivery of the BOBLME NSAP and regional SAP. The NSC should have an annual review and strategic role, and should bring together the 3-4 government agencies responsible for contributing components of the NSAP, as well as representatives of key national industry, social and environmental groups. The FAO Country Programme should also be represented and a member of the NSC. FAO Country Offices should have a role in providing technical assistance, information services and capacity development support to the national theme coordinators and individual strategic initiatives.

245 A national BOBLME theme coordinator (NTC) and a full- or part-time senior government manager/programme officer should be appointed as the focal point for each theme. The three NTCs should be drawn from government policy/management agencies rather than research agencies, and have the ability to convene multi-agency workshops for research, planning and monitoring purposes.

- 246 The NSC government agencies and NTCs would be jointly responsible for NSAP planning and budgeting. The key planning and budget items would be the individual strategic initiatives that are planned and agreed upon. Importantly, as ad hoc and time-bound projects, the strategic initiatives can operate across institutional boundaries (e.g. as a joint three-year special project of 2-3 agencies, with a shared or composite management team). As each strategic initiative is conceived and planned, the theme coordinators and strategic initiative managers should identify needs and opportunities for capacity development and technical assistance. They should also identify which parts of the programme would benefit from additional support from the BOBLME regional programme.

Recommendation 5: to RAP and GEF Unit

A future BOBLME regional SAP should be based far more strongly than at present on the national programmes planned in the participating countries. All of the issues identified in the TDA occur in the individual countries, and solutions (strategic initiatives) need to be first identified and tested at country level. As a secondary step, groups of countries can work together on selected sets of common issues and solutions.

- 247 To develop and operationalize the BOBLME regional SAP, the same structured approach is recommended as for the NSAP above. The regional SAP should have the same three-tiered structure as the NSAPs, comprising the three selected themes, a number of thematic strategies under each theme, and a rolling series of regional strategic initiatives/special projects. Programme management could be based around an annual or biennial regional meeting on each theme, convened between the eight National Coordinators to exchange reports on progress and develop future plans.
- 248 A regional coordinating mechanism in the form of another international project should be developed primarily to manage linkages and exchanges between the BOBLME countries, and secondly to manage a series of regional actions for specific strategic initiatives. Management, administration and budget support should be managed through the FAO RAP in Bangkok. FAO should provide some technical assistance to the programme regionally through the RAP and nationally through country programme offices.
- 249 The set of strategic initiatives for regional action should relate to the regional actions listed in the SAP plan, but should be determined primarily through collaboration and based on the strategic initiatives developed and implemented in one or more of the countries. For example, an IUU campaign strategic initiative could be planned and implemented in several countries, and could be developed in parallel as a joint regional IUU campaign.
- 250 The evaluation recommends that existing regional bodies, or partnerships of regional bodies as appropriate, are identified and commissioned to develop and coordinate action on each specific regional strategic initiative. For example, a strategic initiative for multilateral management of hilsa or Indian mackerel should engage SEAFDEC/ BOBP-IGO, and a strategic initiative to develop region-wide monitoring of pollutants should engage SACEP/ ASEAN.
- 251 It is recommended that phase II does not include generic regional training or research. Any training or research undertaken should be for those in a position to facilitate change and improve management in relation to specific management initiatives within country programmes. Although similar demands may arise from several countries, training and research must be need-driven in relation to the implementation of country programmes, or to regional initiatives relating to the transboundary issues noted above.



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