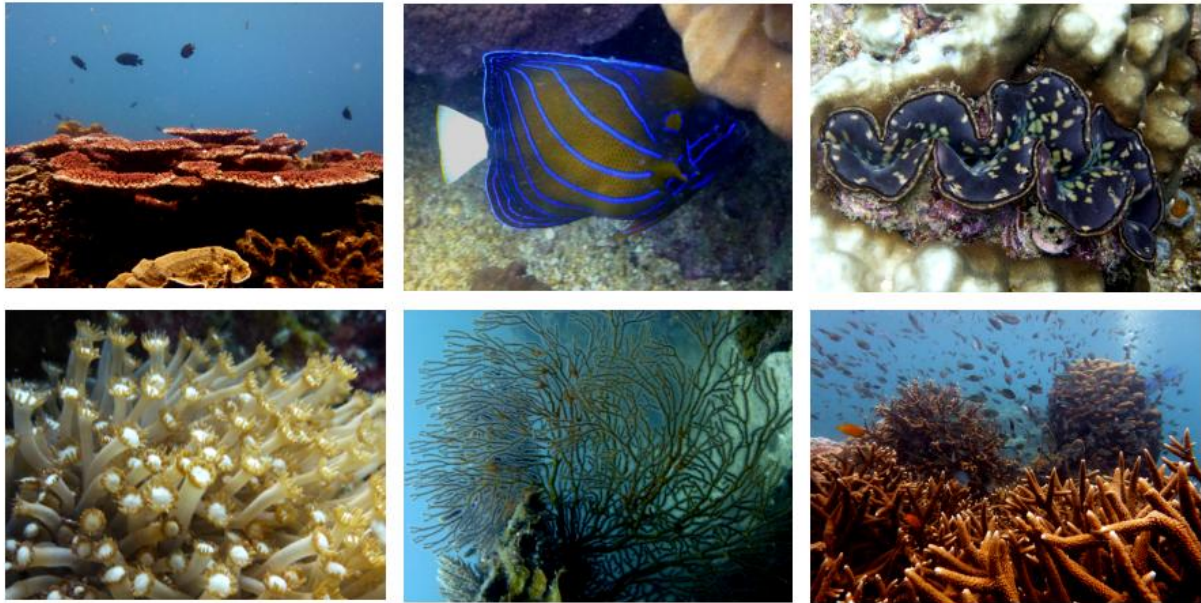


CONSERVING MARINE BIODIVERSITY THROUGH ENHANCED MARINE PARK MANAGEMENT AND INCLUSIVE SUSTAINABLE ISLAND DEVELOPMENT



TERMINAL EVALUATION REPORT

Prepared for:

Department of Marine Parks Malaysia and United Nations
Development Programme Malaysia

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Cover photos: The healthy coral reef environment at Pulau Tioman Marine Park supports an abundant diversity of fishes and invertebrates.

Photo credits: Ms. Izarenah Binti Md Repin.

Disclaimer: The views and opinions expressed in this report are solely those of the authors, and do not reflect official positions of UNDP Malaysia or the Government of Malaysia.

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Acronyms and Abbreviations

APR	Annual Performance Review
AWP	Annual Work Plan
CBD	Convention on Biological Diversity
CC	Community Consultation Committee
CCC	Coral Cay Conservation
CCHI	Cabinet Committee on Highlands and Islands
DID	Department of Irrigation and Drainage
DMPM	Department of Marine Parks Malaysia
DoE	Department of Environment
DoFM	Department of Fisheries Malaysia
EIA	Environmental Impact Assessment
EPU	Economic Planning Unit
FET	Final Evaluation Team
FRIM	Forest Research Institute Malaysia
GEF	Global Environment Facility
GoM	Government of Malaysia
ICTA	International Chief Technical Advisor
IWK	<i>Indah Water Konsortium</i>
JNPC	Johor National Parks Corporation
JPA	<i>Jabatan Perkhidmatan Awam</i> (Public Services Department)
JPBD	<i>Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia</i> (Town and Country Planning Department)
JPP	<i>Jabatan Perkhidmatan Pembentukan</i> (Department of Sewerage Services)
M&E	Monitoring and Evaluation
METT	Management Effectiveness Tracking Tool
MMBH	Malaysia Mega Biodiversity Hub
MNS	Malaysian Nature Society
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoF	Ministry of Finance
MoSTI	Ministry of Science, Technology and Innovation
MoTOUR	Ministry of Tourism and Culture Malaysia
MPA	Marine Protected Area
MPMIS	Marine Park Management Information System
MPU	Marine Park Unit
MPRTF	Marine Park and Reserves Trust Fund
MTE	Mid-term Evaluation
NACMPR	National Advisory Council for Marine Parks and Reserves
NGO	Non-governmental Organization
nm	Nautical mile
NOD	National Oceanographic Directorate
NPBD	National Policy on Biological Diversity
NPD	National Project Director
NPM	National Project Manager

NRE/MoNRE	Ministry of Natural Resources and Environment
NSC	National Steering Committee
PEMANDU	Performance Management Delivery Unit
PIR	Project Implementation Report
PMU	Project Management Unit
SEASSA	Seksyen Ekonomi Alam Sekitar dan Sumber Asli (Environment and Natural Resource Economic Section)
SIP	Stakeholder Involvement Plans
SSC	State Steering Committee
STAP	Scientific and Technical Advisory Panel (GEF)
TDA	Tioman Development Authority
TE	Terminal Evaluation
TER	Terminal Evaluation Report
UNDP	United Nations Development Programme
UNDP CO	UNDP Country Office
UPEN	<i>Unit Perancang Ekonomi Negeri</i> (State Economic Planning Unit)
UPUM	University of Malaya Consultancy Unit
WWF-M	Worldwide Fund for Nature – Malaysia

Executive Summary

1. Project Summary Table

Table ES-1. Project Summary

PROJECT SUMMARY TABLE				
Project Title:	<i>Conserving Marine Biodiversity Through Enhanced Marine Park Management and Inclusive Sustainable Island Development</i>			
		FINANCING	At Endorsement (US\$)	At Completion (US\$)⁺⁺
GEF Project ID	1201	GEF financing	1,952,400	1,946,387
UNDP Project ID	PMIS 1040	PDF A	25,000	25,000
		PDF B	149,750	149,750
		Sub-Total GEF	2,127,150	2,121,137
Country	Malaysia	GoM (cash)	1,012,229	2,183,882
Focal Area	Biodiversity GEF Strategic Priority I: Catalyzing Sustainability of Protected Areas	GoM (in kind)	225,000	369,056
		GoM (in kind) PDF B	39,110	39,110
		Private sector (in cash)	30,000	30,000
		Private sector (in kind)	689,655	689,655
		WWF (PDF-B phase)	7,150	7,150
		Sub-Total co-financing	2,003,144	3,318,853
		Total Project cost	4,130,294	5,439,990
Operational Program	OP-2 (Coastal, Marine, and Freshwater Ecosystems)	Prodoc signature		
Executing Agency	Department of Marine Park Malaysia (Jabatan Taman Laut Malaysia), Ministry of Natural Resources and Environment	Starting Date	Proposed: May 2004	Actual: March 2007
		Closing Date	Proposed: 2007	Actual: 30 June 2013
Other Partners	UPUM, ReefCheck Malaysia			

⁺⁺Figures shown for completion are in fact as of May 31, 2013. The amounts will need to be updated following final closure of project accounts.

Sources: Project Document, Annual Reports, Project Implementation Review, Project Inception Report

2. Brief Description of Project

1. "Conserving Marine Biodiversity through Enhanced Marine Park Management and Sustainable Island Development" was a project of the Government of Malaysia (GoM) carried out in partnership with the United Nations Development Programme (UNDP) Malaysia, and supported by the Global Environment Facility (GEF). A project summary is presented in Table ES-1.

2. Malaysia has established a system of marine parks to protect and manage the marine biodiversity in the waters surrounding 42 islands. Despite their protected status and ongoing efforts for management, there are several threats that affect the marine biodiversity of Malaysia. The principal threats include (i) declining fish stocks and the exploitation of breeding grounds; (ii) loss of habitat for marine life, and destruction of coral reefs; and (iii) habitat degradation and the degradation of water quality.

3. The Project has the overall goal of enhanced marine park management and inclusive sustainable island development. The following project objectives are designed to address the root causes of the threats to biodiversity in the marine parks of Peninsular Malaysia:

- To widen the existing development planning process in order to support marine ecosystem management as well as sustainable tourism through stakeholder involvement;

- To strengthen the capacity of the marine parks management system in Peninsula Malaysia and to ensure effective enforcement of marine park regulations at three project sites; and
 - To enable an influential advocacy framework for the conservation of marine biodiversity supported by a raised level of awareness of the importance and benefits of marine biodiversity.
4. The project piloted a range of interventions to achieve its objectives at three demonstration marine park island sites located off the eastern coast of Peninsular Malaysia—at Pulau Redang, Pulau Sibut-Tinggi, and Pulau Tioman. The three sites are in varying stages of development, and illustrate differing approaches to marine park island management.
5. The project document was revised through the inception process, although the broad project strategy remained in place. The Inception Report (IR) is considered the base document that sets out the 5-year plan for the project. Following a thirteen-month delay, the appointment of consultants was confirmed in February 2009. A Mid-Term review of the project was carried out in early 2011. This Terminal Evaluation (TE) marks the formal conclusion of the project. The performance of the project from its inception is reviewed in this TE, but with major emphasis placed on accomplishments that have been realized since the completion of the mid-term review.

3. Conclusion, Lessons Learned, and Recommendations

a. Conclusion

6. An evaluation rating table has been prepared to summarize the performance evaluation for key characteristics and parameters of the project (Table ES-2).¹ As shown in the Table, for this Terminal Evaluation, the project is given an overall rating of **Satisfactory (S)**. Further details are provided in the narrative text of the TE report.

b. Lessons Learned

7. Extensive experience was gained, and numerous lessons were learned, about conservation of marine biodiversity resources and marine park management, through the implementation of this project. Among the most significant lessons were the following:
- (i) A sound technical understanding of biodiversity and ecosystems is the foundation that underpins effective protected area management. Because there was no qualified marine biologist on the consultant team, the reliability of a number of key outputs (e.g., MPA management plans, and monitoring of biodiversity status) was called into question.
 - (ii) Separation of responsibility for terrestrial and marine management on small islands—a “silo effect”—makes finding workable solutions to common problems more difficult.
 - (iii) A strong sense of community ownership, and recognition by communities that natural resources are their heritage (and realization that their livelihoods are closely tied to sustainable resource use) can contribute to a strong conservation ethic; even in systems that historically have applied a ‘top-down’ management approach (such as Malaysia’s), community-level support and cooperation are needed to curb adverse environmental impacts that could weaken conservation initiatives.
 - (iv) Creation of viable alternative livelihood opportunities can benefit marine biodiversity conservation efforts by (1) diverting livelihood in coastal communities away from extractive activities that deplete biodiversity and fisheries resources, into more environment-friendly

¹ The Table follows the format suggested in Annex 2, UNDP 2012. Guidance For Conducting Terminal Evaluations Of UNDP-Supported, GEF-Financed Projects.

- services industries (e.g., tourism), and (2) fostering greater community cooperation, understanding and participation in conservation efforts.
- (v) Complex project design, without clear indicators for measuring performance, makes project implementation and monitoring and evaluation more difficult.
 - (vi) Effective marine conservation within protected areas requires detailed, site-specific studies of the living resources of the area, and tailoring of zonation plans to fit the specific needs for the location, backed up by appropriate legislation and regulations.
 - (vii) Frequent changes in key personnel (whether in project staff, implementing agency, or steering committees) makes project operations inefficient and can cause lack of continuity and considerable delays.
 - (viii) In the absence of hard scientific data, local ecosystem knowledge (LEK) is an adaptive approach that can provide valuable information upon which preliminary planning can be based. However, the LEK information needs to be ground-truthed and validated for more critical management decision-making.
 - (ix) Strong interagency cooperation can greatly enhance project efficiency and result in cost savings.
 - (x) Strong leadership and sense of commitment among project staff can catalyze positive changes that extend beyond the scope of the project itself.
 - (xi) Strong linkages between government, academia, NGOs, and communities can lead to more effective identification of key problems, and their subsequent solutions.
 - (xii) Successful project actions can serve as models to be replicated or expanded by other stakeholders, at other sites, for broader beneficial purposes.
 - (xiii) Improvements to physical infrastructure alone cannot solve environmental problems. In order to achieve the desired outcome, such improvements need to be supported with adequate community preparation, technical knowledge and financing for operation and maintenance.
 - (xiv) Given the important role of the EPU in budget approval, it is critical that DMPM undertake purposeful coordination with the EPU; proposals need to be well thought-out and presented.
 - (xv) The uniform application of a 2 nautical mile restricted no fishing zone is a 'one size fits all' approach that may not be workable in all situations. A more flexible and tailored zonation system within the marine parks may generate stronger community support, and ultimately lead to improved conservation results.
 - (xvi) While typically GEF is highly engaged in evaluation and providing feedback during the project preparation and formulation stage (e.g., STAP review, CEO endorsement process, etc.), for this project, it seems that a "laissez-faire" management approach was applied during project implementation. Greater involvement by GEF at critical points during implementation could have helped to avoid or minimize some of the design problems (e.g., overly complex project outcomes, measurable indicators not well defined) that affected the project.
 - (xvii) Establishing a clear legal basis for tourism concerns to operate is of vital importance, and is intimately linked to the preservation of the environmental integrity of small island ecosystems, including preservation of marine biodiversity. Two of the important legal elements are: (i) implementing tenurial arrangements that would enable and encourage

operators to make the long-term investments in infrastructure improvements (e.g., solid waste disposal and sewage treatment) that are needed to ensure that environmental quality is preserved; and (ii) making sure that all resort operators are in compliance with prevailing EIA requirements, and have thus been given legal clearance (in the form of a Certificate of Fitness) to operate.

c. Recommendations

8. Closely associated with the large number of lessons learned, were an even greater number of key recommendations that emerged from this terminal evaluation of the project. A total of some 30 recommendations are provided in the TE report. These recommendations will be useful in formulating, monitoring and evaluating similar marine conservation and management projects in the future. Of the many recommendations offered in the TE report, the following are regarded to be the most critical for ensuring the sustainability of marine biodiversity resources and improved management of marine parks in Malaysia:

- (i) Continue to conduct advocacy for passage of a Marine Parks Act.
- (ii) Strengthen awareness-raising efforts during State and District Action Council monthly meetings. Such efforts should focus especially on raising the awareness of the importance of MPA management for the economic sustainability of small marine park islands.
- (iii) Because DMPM is still a new department, its staff are still in need of further training and experience. Therefore, enhance technical knowledge of DMPM staff at all levels, through training, academic coursework and mentorship. This should include capacity building in basic marine biology and ecology, protected area management, environmental impact assessment, enforcement, and related disciplines.
- (iv) Employ qualified marine biologists, conservationists, and protected area management specialists to review the three MPA Management Plans that were developed under the project, to ensure adequate technical acceptability. Through further community consultation, finalize Plans and pursue their adoption to give a legal basis for enforcing the conditions of the Plans. The plans also need to be harmonized with the current legal restrictions on fishing activities within a 2-nautical mile limit in all Marine Parks. Once the acceptability of the plans has been demonstrated, replicate the plans for other MPs outside the project area of coverage.
- (v) To overcome divisions associated with sector-based management, identify and strengthen mechanisms to facilitate more effective coordination between agencies responsible for oversight of terrestrial (land-based) and marine-based activities (e.g., through the Cabinet Committee for National Physical Planning). Alternatively, explore the establishment of integrated State parks that include management of both terrestrial and marine components on small islands.
- (vi) Strengthen sustainable financing for marine park operations by (i) developing an action plan based on the DMPM business plan that is time bound with a prioritized road map, (ii) exploring linkages with relevant GoM-UNDP initiatives such as project for Payment for Ecosystem Services (PES), Biodiversity Finance Assessment and international initiatives such as The Economics of Ecosystems and Biodiversity (TEEB) studies, (iii) exploring the feasibility of additional mechanisms including global trends and practices such as voluntary tourist contribution systems, tourism tax on rooms, carefully designed and monitored volunteer tourism, etc., (iv) discussing the potential for benefit-sharing with local communities/local authorities (e.g. funds from voluntary contributions to be channeled to community development and capacity building) and (v) considering

development of a full cost assessment of financing needs that are linked to conservation objectives and strategies to fulfill the costs.

- (vii) The steering committees established under the project proved to be effective vehicles for coordination across different sectors and at different institutional levels. Therefore, the National Steering Committee (NSC), State Steering Committees (SSCs), and Community Coordinating Committees (CCCs) should be maintained. The prevailing proposal is that the project SSCs will be converted to State Steering Committees for Marine Park Management. CCCs could continue to operate at the local level, while the NSC should be maintained at the national level. It is recommended that a roadmap for the continuation of these vital coordinating bodies be prepared.
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Table ES-2. Evaluation Rating Table

Criteria	Rating	Comments
Monitoring and Evaluation: Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU)		
Overall quality of M&E	U	Baselines not clearly established for many parameters; indicators not well articulated, nor matched to appropriate levels in project framework
M&E design at project start up	U	Baseline data gathered in PDF-B (Coral Cay surveys) but not applied accurately; indicators needed revision during inception phase; revised indicators not applied in a systematic way
M&E plan implementation	MU	Prescribed M&E steps were followed at specified stages (i.e., MTR, PIRs, etc.) however, inherent weaknesses in indicators made it difficult to conduct meaningful M&E
IA & EA Execution: Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU)		
Overall Quality of Project Implementation/Execution	HS	UNDP and DMPM personnel showed high level of commitment to achieve the targeted project objective and outcomes
Implementing Agency Execution	HS	DMPM allocated adequate human and financial resources in implementing project activities; adaptive management approach enabled the agency to overcome initial delays in execution; project and DMPM activities were mutually-reinforcing and complementary
Executing Agency Execution	S	UNDP Malaysia provided effective backstopping and guidance to IA as required
Outcome: Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU)		
Overall Quality of Project Outcome	S	The project sought to achieve several significant outcomes, and was successful in most of these. This included raising awareness, and generating support for conservation within local communities. Provision of viable alternative livelihoods within coastal communities contributed to reducing stress on biodiversity resources. Frameworks were established for institutional coordination and information sharing. Enforcement was significantly strengthened through training activities.
Relevance: relevant (R) or not relevant (NR)	R	Project outcomes contribute to global environmental benefits for biodiversity conservation. Outcomes are highly consistent with international agreements, and national and local laws and policies.
Effectiveness	S	Project was effective in demonstrating the benefits of engaging the community for achieving improved marine biodiversity conservation.
Efficiency	HS	Adaptive management approach enabled the DMPM to overcome initial delays in execution; the project successfully leveraged both human and financial resources..
Sustainability: Likely (L), Moderately Likely (ML), Moderately Unlikely (MU), Unlikely (U)		
Overall sustainability	ML	Although the project is likely to be sustainable in a number of its dimensions, the cumulative sustainability rating cannot be higher than the lowest component rating.
Financial resources	L	Multiple financing streams are available to support sustained management of marine parks—regular government budget allocations, Marine Park trust fund, user fees, and co-financing through CSR activities, NGOs, etc.
Socio-political	L	Engagement of communities offers potential for sustained support for marine conservation efforts. DMPM established a new budget line for community development. Such support should be maintained until communities achieve greater self-sufficiency.
Institutional framework and governance	ML	DMPM capacity was strengthened through absorption of Project personnel; however, some resistance was encountered to forming partnerships with some key institutions (e.g., Min. of Tourism, at State level). Some progress has been made toward passage of Marine Parks Act.
Environmental	ML	The project was successful in reducing some stresses on biodiversity resources. Risks of other environmental stresses still exist, such as climate change-related impacts, crown of thorns infestations, and marine pollution from external sources (among others). In particular, the growth of tourism needs to proceed according to the ecological carrying capacity of each site, with appropriate infrastructure and facilities in place to adequately manage solid waste and wastewater that could otherwise adversely affect the sensitive marine environment.
Impacts: Significant (S), Minimal (M), Negligible (N)		
Environmental Status Improvement	M	Minimal improvements in coral cover recorded during project implementation period.
Environmental Stress Reduction	M	Moderate reduction of stress achieved through substituting alternative livelihood activities (tourism) for capture fisheries
Progress towards stress/status change	S	Significant changes toward stress reduction and improved status achieved through greater conservation awareness, community engagement, improved Marine Park management.
Project Results: Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU)		
Overall Project Results	S	Project achievements were numerous, especially in raising awareness, and generating enthusiasm, ownership, and support for conservation at the community level. Provision of viable alternative livelihoods within coastal communities contributed to reducing stress on biodiversity resources. Effective transition of personnel staffing the project, into permanent agency positions, promotes sustainability. Enforcement was strengthened through training activities and community participation. Further work is needed in advocating for adoption of a Marine Parks Act, closer engagement with key agencies such as the Ministry of Tourism, and strengthening the technical scientific basis for marine park planning and decision-making.

I. Introduction

A. Background

1. The marine biodiversity of Malaysia is globally significant for several reasons. Coral diversity, consisting of 221 species, (including 67 species not reported from Malaysia prior to project surveys) represents 80% of the total species found in an equivalent area in the “Coral Triangle”. The diversity of coral-associated fish includes 298 species, and, like the coral diversity, represents 80% of the fish fauna in an equivalent area of the Coral Triangle. In addition, marine biodiversity here includes several other key rare and vulnerable species, such as sea turtles and dugong.
2. As one of several initiatives aimed at protecting and managing these globally-significant biodiversity resources, the Government of Malaysia (GoM) has established a system of marine parks in the waters surrounding 42² islands. Despite the protected status of these sites, and ongoing efforts for their management, there are several threats that affect the marine biodiversity contained therein, and more broadly, within the marine and coastal waters of the country. The principal threats include (i) declining fish stocks and the exploitation of breeding grounds; (ii) loss of habitat for marine life, and destruction of coral reefs; and (iii) habitat degradation and the degradation of water quality.
3. The Global Environment Facility (GEF) funded the project, “Conserving Marine Biodiversity through Enhanced Marine Park Management and Sustainable Island Development” for implementation through a partnership between the United Nations Development Programme (UNDP) Malaysia and the Department of Marine Parks Malaysia (DMPM), of the Ministry of Natural Resources and Environment (NRE). The intended impact of the GEF-funded project is to contribute to the conservation of globally-significant biodiversity through the improvement of the existing management of marine protected areas in Malaysia.
4. The project seeks to improve the current management system in place for three project sites—Pulau³ Tioman, Pulau Redang and Pulau Sibu-Tinggi—located along the Eastern coast of Malaysia (see map, Figure 1, and summary of characteristics of the three sites, Table 1). The project also has activities on the national and systemic level, as well as other interventions for ensuring, to the extent possible, the replicability of new initiatives demonstrated in the three project sites.
5. The project contributes to the goals of GEF’s Strategic Priority #1 on Catalyzing Sustainability of Protected Areas, and to the achievement of the objectives of Strategic Priority #2 on Mainstreaming Biodiversity in Production Landscapes and Sectors by incorporating biodiversity concerns into the tourism sector.
6. Because the project concluded at the end of June 2013, as per GEF and UNDP guidelines, consultants were contracted close to the closing of the project, to conduct a Terminal Evaluation (TE) to determine the level of success of the project in achieving its stated objectives.

B. Purpose of the Evaluation

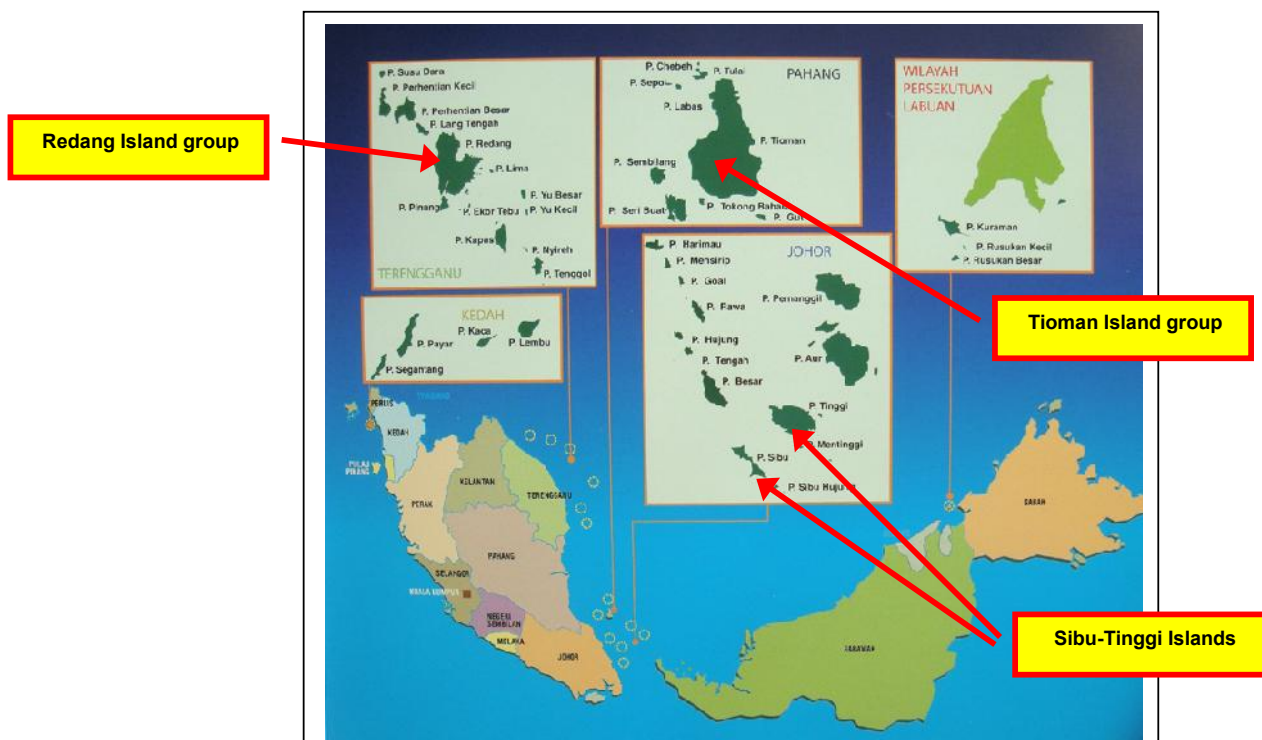
7. As part of the process required under UNDP/GEF Monitoring and Evaluation Policy, this Terminal Evaluation (TE) provides a comprehensive overall assessment of the project at its conclusion, including a critical assessment of the project’s administrative and technical strategic issues and constraints. The TE was carried out by an independent evaluation team consisting of an international and a national consultant. The field evaluation was conducted from 9th May 2013 to 20th May 2013 over a period of 12 days. The approach that was utilized is detailed in the Methodology section of the report, and the complete Terms of Reference for the TE are presented in Annex A.

² Originally 40 islands were gazetted in 1994. An additional two islands were declared in 2008 by the Terengganu State Government.

³ “Pulau” is the Bahasa Malaysia term for “island” and in this report, the two terms are used interchangeably.

8. The TE concentrates primarily on work that has been undertaken since the time of the mid-term review. It focuses on (i) project implementation performance; (ii) results of implementation, including attainment of intended outcomes and higher-level project objectives; and (iii) lessons learned about project design, implementation, and management. Based on the findings and lessons learned, the evaluation provides recommendations for strategies, approaches, and activities that could help to improve future efforts for the conservation of marine biodiversity through enhanced management of marine parks and sustainable island management.

Figure 1. Composite Map of Marine Park System of Malaysia, Showing Locations of 3 Project Sites



9. The TE evaluates the accomplishments of the project as defined by the following key criteria:

- Attainment of Objectives (the extent to which the project's immediate and development objectives were achieved)
- Relevance
- Effectiveness and Efficiency
- Country Ownership
- Mainstreaming
- Sustainability
- Impact

Table 1. Main Characteristics of 3 Marine Park Project Sites

Details	Redang Island	Tioman Island	Sibu-Tinggi Islands
Area (ha)	12,750	25,154	14,440
State	Terengganu	Pahang	Johor
Management Authority	DMPM	DMPM and Tioman Development Authority	DMPM
Staff	32 Permanent (P) and 1 Temporary (T)	19 P, 4T	25
Main threats	Recreational activities and tourism, Household sewage and urban waste water, Sewage and waste water from protected area facilities (e.g. toilets, hotels etc), erosion and siltation	Housing and settlement, Household sewage and urban waste water, Sewage and waste water from protected area facilities (e.g. toilets, hotels etc), Tourism and recreation infrastructure, garbage and solid waste, Excess energy (e.g. heat pollution, lights etc), Loss of cultural links, traditional knowledge and/or management practices	(Lower threats due to lower population and associated impacts): Housing and settlement, Household sewage and urban waste water, Sewage and waste water from protected area facilities (e.g. toilets, hotels etc)
Islands	9 islands	9 islands	13 islands
Access points	45km by ferry from Kuala Terengganu or 22km by boat from Tanjung Merang jetty	Twice daily flights by Berjaya Air, around 2.5 hour ferry journey from Tanjung Gemuk, Pahang or Mersing, Johor	45 minutes by boat from Tanjung Leman, 37 km from Mersing town
Marine biodiversity attributes	149 species of coral reefs, 209 fish species, 5 rumpit laut and 51 rumpai laut (seaweeds)	183 coral species, 233 coral fish, 3 species of rumpit laut and 54 rumpai laut	228 hard corals, 5 species soft corals, >300 species of coral fishes and 11 seagrass species
East coast monsoon	Generally November to March		
Houses	484*	895	
Population	2,013*	3,168 (with over 70% below 35 yrs old)	164
Race	Mainly Malays (88%)	Mainly Malays (over 97%)	Mainly Malays
Main economic activity	Over 72% are involved in tourism. Others include businesses and fishing.	Tourism, fisheries and agriculture	Traditional fishers, general workers, and tourism workers.
Facilities	Water supply from the hill, electricity, road, public telephone and toilets, clinic, primary school, secondary school are in process, grocery store, post office, community hall, cyber café, airport; sewage treatment plant recently constructed but not yet operational	Water supply (Govt), Electricity, Road, Public telephone and toilets, public transport, clinic, primary school, secondary school, police and fire station, grocery store, community hall, cyber café, airport	Water supply from the hill, electricity, road, clinic, primary school, police station, grocery store, community hall

*Department of Statistics Census (2011)

C. Scope and Methodology

10. The scope of the TE was to assess the overall performance of the project, “Conserving Marine Biodiversity through Enhanced Marine Park Management and Sustainable Island Development.” While the entire project is evaluated, this TE focuses on assessing project performance during the latter half of its implementation, i.e., after the conclusion of the Midterm Review.

11. For its methodology, the TE followed a systematic, logical approach, to arrive at an unbiased and

informed determination about the performance of the project. The various components and steps followed in the methodology are represented in Figure 2.

12. As shown in Figure 2, the TE was conducted by employing several parallel data-gathering processes. These included:

- **Review of project documents:** The extensive documentation that had been compiled over the course of the project implementation was reviewed. This included a range of project status reports, progress reports, monitoring reports, financial reports, and audits, as well as various other resource materials and publications that were produced under the project. Websites and internet sources were also reviewed. A complete list of the reference materials that were researched in the course of the TE is provided in Annex B.
- **Group discussions and interviews:** a series of meetings were held, both with individuals and groups, to discuss stakeholders' views and tap their knowledge about the project. These included meetings with representatives of UNDP, DMPM, the National Steering Committee (NSC), State Steering Committees (SSCs), Community Coordinating Committees (CCCs), consultants, and NGOs (among others). The list of persons met is presented in Annex C.
- **Site Visits:** the TE team consultants visited two of the three project sites (in Pulau Redang and Pulau Tioman). This provided the consultants with the opportunity to observe first-hand the prevailing biophysical environment, and to get a sense of the existing socioeconomic conditions within the island communities. Underwater observation of the condition of the marine ecosystem was also performed by the International Consultant using SCUBA. The schedule of field activities, including sites visited and meetings, is presented in Annex D.

13. Following the gathering of data, the information was reviewed and analyzed according to the prescribed evaluation criteria, including relevance, effectiveness, efficiency, and sustainability, among others. The starting-point for the analysis was the completion of an "Evaluation Criteria Matrix", which is presented in Annex E. The Evaluation Criteria Matrix was used to ask key questions and compile and organize the key points for each evaluation criterion. From this, it was possible to develop a scoring for the various criteria, which then gave a final evaluation result for the project as a whole.

14. While the UNDP evaluation policy does not require ratings as part of its performance standards, the GEF stipulates that ratings should be used to assess project relevance, effectiveness and efficiency, as well as the quality of M&E systems. UNDP has agreed to rate all terminal evaluations of UNDP supported GEF financed projects for these criteria. It is important to note that the ratings scales differ for different criteria.⁴ The TOR for this evaluation stipulate that a six-point scale (HS to HU) should be used for rating project implementation, objectives, outputs and outcomes.

15. Other key rules that govern the assignment of rating scores in this evaluation are as follows:⁵

- **Relevance and effectiveness:** these will be considered as critical criteria. The overall outcome rating of the project may not be higher than the lowest rating on either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.
- **Sustainability:** All the risk dimensions of sustainability are critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with the lowest rating.

⁴ UNDP 2012. Guidance For Conducting Terminal Evaluations Of UNDP-Supported, GEF-Financed Projects.

⁵ Taken from the Evaluation Terms of Reference.

- **M&E Plan Implementation:** M&E Plan Implementation will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on M&E Plan Implementation.

16. The results of this comprehensive analytical process are described in detail in this report.

D. Structure of the Evaluation Report

17. This Terminal Evaluation Report (TER) contains an Executive Summary that gives a broad overview of the project and the findings of the Terminal Evaluation (TE). The text of the main report is divided into the following sections: (I) an Introduction that provides project background, discusses the purpose of the evaluation, and defines the evaluation scope and methodology; (II) a section on the Project and its Development Context, which explains the purpose of the project, its objectives, and expected results; (III) a section on the Findings of the evaluation, which includes detailed discussion of the relative success of the project in achieving the desired outcomes, measured against a set of defined criteria; (IV) the Conclusion, which states the overall performance rating for the project; (V) Lessons Learned from the project; and (VI) Recommendations derived from the lessons learned, that could be applied in improving future projects or carrying forward initiatives that could complement and strengthen the project objectives. The Annexes provide important supporting information, mainly concerning the mechanics of the evaluation (Threat Analysis, TORs, References, List of Persons Met, as well as matrixes that were used as part of the analytical process).

II. The Project and its Development Context

A. Project Start and Duration

18. The project was conceived in 2002 and subsequently approved in 2006. It officially started in March 2007 and the initial expected completion date was scheduled for February 2011. Project start-up was slow, partly due to the institutional transition of the DMPM from a 'section' in July 2007 and prolonged government procurement procedures in hiring of consultants. In addition, challenges related to the lack of baseline data and management of the consultant team also contributed to the delay of the project. Over the course of the project implementation, two project extensions were approved, with the final end date ultimately moved to June 2013. The final project duration thus came to approximately 6 years and 3 months.

B. Problems that the Project Sought to Address

19. As mentioned previously, the principal threats to marine biodiversity in Malaysia include (i) declining fish stocks and the exploitation of breeding grounds; (ii) loss of habitat for marine life, and destruction of coral reefs; and (iii) habitat degradation and the degradation of water quality.

20. Underlying root causes that have brought about these threats have been identified, and include (among others) (i) the federal-state split in jurisdiction over the marine park islands and surrounding water bodies; (ii) sector-based policy-making and planning with regard to marine park islands; (iii) political decision-making on higher levels that does not reflect the consideration of marine conservation issues; and (iv) a low level of awareness among stakeholders, on marine park regulations and marine conservation. A threats diagram, which was originally included as a basis and rationale for the formulation of the project in its design phase, is presented in Annex F.

21. As can be seen in Annex F, threats and their causes may be identified at several different levels, including primary threats, intermediate causes, and root causes. The threats diagram identifies those threats and causes that fall within the scope of marine park management, and others that are outside the scope of the management of marine parks. A number of causes are cross-cutting, and may occur both within and outside the scope of marine park management functions.

22. While the project sought to primarily address those issues and causes that fall within the scope of the marine park management system, by addressing a wide spectrum of issues and problems in a holistic manner, it also helped to significantly reduce other threats and causes, even though, strictly speaking, these were outside the scope of marine park management (e.g., land-based pollution falls outside the purview of the Marine Parks Department, but is an important threat that was taken up under the project).

C. Project Goal and Objective

23. The overall project goal was to ensure the conservation and sustainable use of marine biodiversity in Malaysia and sustainable island development. The project's objective was to achieve enhanced Marine Park management and inclusive sustainable island development. Seven project outcomes were developed to achieve the project objective.

24. Various changes to the project structure were recommended and made during the inception phase to provide a clearer roadmap for project delivery. In particular, the immediate objectives that were developed during the initial project formulation were replaced with a single objective and subsumed within the project outcomes (GoM, UNDP, GEF 2007). These changes are summarized in Table G-1, Annex G.

D. Project Outcomes and Outputs

25. In accordance with the main project goal and objective mentioned in Section II., C., above, the project sought to achieve a number of key outcomes. These were as follows:

- (i) Adaptive marine park management achieved by a mechanism of cross-sectoral information sharing and knowledge transfer into decision-making bodies;
- (ii) Mechanisms put in place for effective multi-sectoral policy making, development planning and improved financial sustainability;
- (iii) Local communities involved in marine park management and sharing access to benefits of biodiversity conservation by generating alternative livelihoods;
- (iv) Tourism operators participating in protected area management and reduction of the direct and indirect impacts of tourism activities on biodiversity;
- (v) Marine Park Units (MPUs) following international standards of protected area management and achieve efficient enforcement and prevention of violations;
- (vi) Awareness of the importance of biodiversity conservation within the marine park system in Malaysia raised among selected target groups; and
- (vii) Framework created for strong stakeholder advocacy for the conservation of biodiversity in the marine parks of Malaysia.

26. These outcomes, together with the 10 component "output themes" that were targeted to help achieve them, are represented diagrammatically in Figure 3.

Figure 2. Analytical/Evaluation Methodology

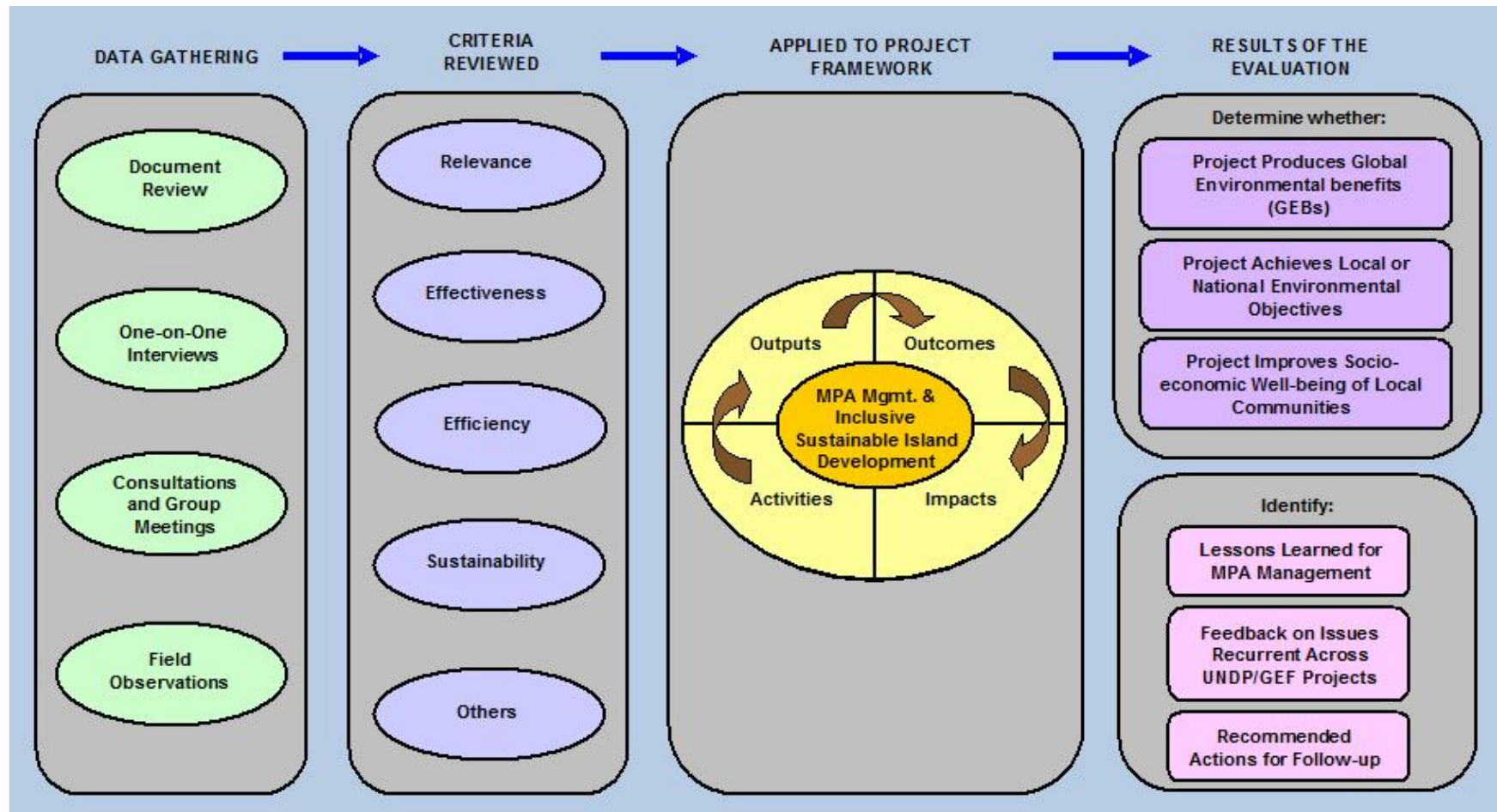
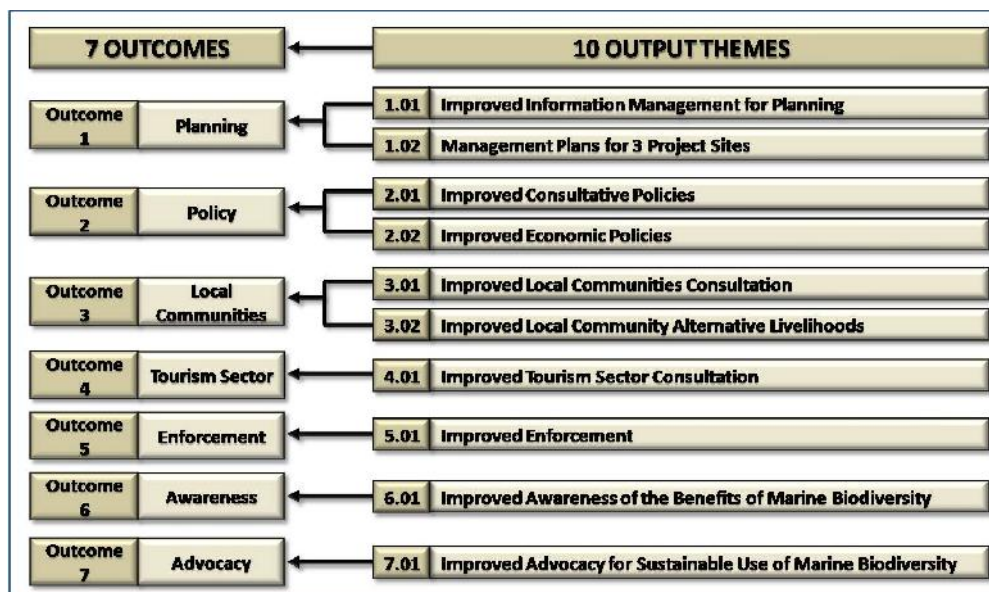


Figure 3. Project Outcomes and Output Themes



III. Findings

A. Project Design

1. General Design of the Project

27. The project design attempted to address a longstanding existing gap found in most natural resources management- and conservation-related projects in Malaysia, namely, the relative weakness of community-based inputs for management, in the face of a strong historic bias towards employing a “top-down” approach. Under the top-down scenario, communities had historically been on the “receiving end” of decision- and policy-making processes, rather than being actively engaged as participating stakeholders in such processes. The emphasis that the project placed on strengthening ties to the community, in order to better support marine conservation efforts, empowered the communities and facilitated a sense of ownership for natural resources management, thus proving to be a very successful strategy.

28. The project was also very timely, since it coincided precisely with the expansion of the Marine Parks Unit, formerly in the Department of Fisheries under the Ministry of Agriculture, into a new Department of Marine Parks Malaysia in the Ministry of Natural Resources Management. This expansion, which included a significant increase in staffing, provided a tremendous boost to the operations and visioning of the Department.

29. It must be mentioned that, partly offsetting these positive aspects, was the fact that the project was extremely ambitious (in fact, overly ambitious) in its scope and design. While typically major projects attempt to achieve 4 or 5 key outcomes, this project ultimately included 7 outcomes in its design, that were based on 10 outputs which had been distilled down from an original 40 proposed outputs (see Annex G) (GoM, UNDP, GEF 2007). This extremely ambitious scope led to a host of problems, including difficulties and delays in consultant contracting and project start-up, spreading of human resources too thinly, and a very confusing and complex framework for monitoring and evaluation of project performance.

30. The problems that could be created by such an ambitious project scope may have been better recognized, and steps taken to avoid them, had a thorough capacity assessment been conducted at the beginning of the project. Such an assessment would have been extremely helpful in evaluating the ability of the Department to effectively implement, manage, and monitor such a wide array of proposed project activities.

2. Project Baseline and Indicators

31. Project indicators were developed and modified during three separate phases. These included (i) the project formulation and design phase (as reflected in the project document); (ii) inception period (as reflected in the inception report); and (iii) implementation period (as reflected in project consultants' report on MPA management indicators).

32. At project inception, it was noted that the project document did not provide outcome indicators and their means of verification. Development of outcome indicators was requested by the UNDP-CO in early June 2007 (GoM, UNDP, GEF 2007). Subsequently, "priority" and "non-priority" outcome indicators were developed and presented during the inception workshop. From the PIRs, it was evident that the project only applied the priority indicators for monitoring progress, with no reference made to the non-priority indicators in project reporting.

33. The inception report indicated that many of the outcome indicators were capacity-building indicators, which could also be used for monitoring the delivery of project activities and outputs. While the inception report presented a timeline for monitoring (beginning, mid-point, and end of project; see Annex 5 of GoM, UNDP, GEF 2007), it noted that more detailed quality guidelines/procedures for monitoring the outcome indicators still needed to be developed.

34. A review of the new indicators was made during the MTR. The MTR noted that the project outcome indicators developed were not easy to use as they did not show performance, quality, or outcomes that were readily measurable (GoM, UNDP, GEF 2007). The report also highlighted the lack of baseline data on ecosystem health, and proposed that the indicators be revised and updated to enable easier project monitoring through the PIR. In summary the MTR found that the Monitoring and Evaluation design and implementation had some shortcomings:

- Indicators of progress are difficult to apply for reporting purposes
- No use of qualitative measures for capacity building activities
- Lack of biodiversity and coral health monitoring baseline

35. In a management response to the MTR, it was indicated that the UPUM (consultants) were tasked to develop new indicators for all outputs within the project (see recommendation 6.1.5 of the MTR management response). It was further reported that upon completion, the PMU would review the indicators as they would form part of the DMPM management plans.

36. The Consultants developed indicators that targeted MP management, rather than project management (possibly in response to the request during management review, that indicators be incorporated into the Marine Park management plans). Since the new indicators developed by the consultants were not suited for the purpose of project monitoring, the prior indicators developed in the inception period were the ones used for project M&E, as reflected in the PIR.

37. Figure G-1 in Annex G depicts how the project indicators evolved from the original project document and through the inception phase. Based on SMART criteria,⁶ the TE provides the following analysis by

⁶ SMART: S= Specific, M= Measurable, A= Achievable, R = Realistic, T= Timely. The SMART criteria are highlighted in

examining changes that were made to the indicators. However, it should be recognized that strict comparison of these indicators is difficult, since for these two phases, the indicators applied to two different levels (e.g. the immediate objective level, versus outcome level).

- In terms of being **'Specific'** and also with respect to **alignment to the project objective and indication that primary threats are addressed**, changes made to the indicators during the inception phase overlooked key objective characteristics, e.g., inclusion of indicators for the number of coral fishes, and for river and marine water quality—indicators that were originally included in the project document. The inception report highlighted the need to build capacity to monitor and report on the priority outcome indicators—thus shedding light on the reason why many of the outcome indicators ultimately selected were capacity-building indicators (GoM, UNDP, GEF, 2007).
- In terms of being **'Measureable'**, the perception-based indicators are relatively more difficult to measure, particularly on attitude and opinions.
- In terms of being **'Achievable'**, the inclusion of a 10% target of increased marine park area seems feasible. However, it was not clear that the project outcomes would directly advocate for increased MPA area, though activities undertaken during the project could lead to expansion in park area in the future. While it would appear that expansion of park area is a desirable accomplishment, it must be noted that such expansion would also need to be accompanied by a corresponding increase in capacity—without this, such an increase in area could lead to weaker management in the marine parks.
- In terms of being **'Realistic'**, it is noted that measurement of various indicators such as attitude and opinion, and extent of coral cover, realistically require considerable planning, time, and resources to conduct. The project document indicated expected costs to be incurred for monitoring relevant indicators, but there is no evidence to suggest that solid monitoring and evaluation was undertaken during project implementation. Monitoring and evaluation work was grouped under Output/Activity 1 under Project Management and Monitoring and Evaluation which appeared to include informal site visits, consultations, and ocular surveys, but not comprehensive monitoring surveys. Management response to the MTR indicated that funds were secured in 2011 for the procurement of satellite images and creation of GIS maps populated with marine inventory information as baseline data. These were developed, together with the LEKs, as part of the inputs into the DMPM draft management plans.
- In terms of being **'Timely'** it was seen that the indicators for the project were still being developed in 2012 towards the end of the project, hence this did not allow for any meaningful project monitoring.

38. In addition, for the current evaluation, through a separate process, the TE consultants also attempted to utilize the indicators that had been used for prior evaluations in the PIR (PIMS file, 2011), to create a monitoring matrix. The results of that effort are presented in Annex H.⁷ Through this quite independent effort, the TE team came to the same conclusion that the MTR had: namely, that the

the UNDP Guidance for Conducting TEs of UNDP/GEF Projects [2012]).

⁷ The purpose of Annex H is to report the achievement status of project outcomes against the indicators applied in PIRs. The matrix includes analysis related to the suitability of the indicators, and comments on outputs achieved. It also provides background information to the write-up of those parts of the Results section of the Terminal Evaluation Report (TER), that pertain to project outcomes. However, because of the mismatch of indicators to project outcomes (as explained in this section of the TER), rather than providing ratings within this matrix, ratings were developed based a more holistic evaluation of the project outcomes, and integrated within the Results section. This is similar to the approach adopted in the MTR.

indicators that had been established for evaluating project outcomes were not suitable, for a number of reasons.

39. Another matrix has been prepared (Annex I) in which the TE team identifies the shortcomings of the indicators, that persisted throughout project implementation and made project monitoring and evaluation more difficult (including for this TE). Annex I also includes recommended corrective actions that should have been taken to clarify the baselines and indicators, which might have significantly strengthened the project monitoring and evaluation framework.

3. Assumptions and Risks

40. The project document identified the following key risks: i) Crown-of-thorns starfish⁸ infestations, ii) coral bleaching due to El-Nino phenomenon, iii) lack of relevant management experience in project stakeholders, iv) non-cooperation of stakeholders (federal-state and local communities).

41. A new Risk Management module was introduced in 2006 for all UNDP/GEF projects after the completion of the project document. To address this, a Risk Management Strategy, comprising risk assessments, management and response was developed during the inception phase (GoM, UNDP, GEF 2007). The inception report also provided an overview of the linkages between the risk indicators and associated outcome indicators.

42. The risks were assessed and ranked in relation to critical, moderate or low levels. The critical risks were adverse impacts from projected climate change and limited institutional capacity. Four modest risks were identified including the lack of stakeholder cooperation at the Federal-State level, Community level and also risk of stakeholder cooperation in relation to local communities and protected areas expansion. The fourth modest risk identified was related to the access to project sites during the monsoon season. Infestation of crown-of-thorn starfish was highlighted as a low risk (GoM, UNDP, GEF 2007).

43. The MTR identified that the slow progress at the initial stage of the project also created risks, particularly in relation to the implementation of alternative livelihood development and was accorded a high priority (GoM, UNDP, GEF 2011). The PIR 2012 report presented 5 critical risks linked to regulations, operations and organizational issues with some linkages to the original risks highlighted.

4. Lessons from Other Relevant Projects

44. At the initial stage of the project, the team visited the project office of the UNDP-GEF Peat Swamp Project implemented by the Forest Research Institute of Malaysia (FRIM). The Peat Swamp project team shared lessons about implementation of project activities, logistics and awareness and outreach programs. More recently,⁹ linkages with the Coral Triangle Center (CTC) in Bali were made for the provision of training to DMPM staff and other stakeholders from the project area, focusing on capacity development of practitioners in marine conservation. The training was designed to assist MPA managers to understand planning methods for MPAs, to enhance MPA managers' ability in designing projects, to conduct a self-assessment of MPA management effectiveness, and to identify gaps to be addressed in order to improve performance. Other linkages between the project and other interventions within the sector are discussed in Section III.A.6., below.

⁸ The Crown-of-thorns starfish (*Acanthaster planci*) is a species of starfish widespread throughout the Pacific, that preys on corals. Infestations can often denude large areas of reef.

⁹ 27-31 June 2012.

5. Stakeholder Participation

45. Stakeholder participation is the core element for effective implementation of the project, as the project's key strategy emphasized consultative management processes and stakeholder involvement.

46. The main mechanisms for engagement were through the meetings of the National Steering Committee (NSC), State Steering Committees (SSCs), and Community Consultative Committees (CCCs). Other additional avenues for stakeholder participation included training courses, especially for various livelihood activities (e.g. snorkel guide, etc.). The matrix below (Table 2) presents the mechanisms that were developed for engagement with various stakeholder groups at different levels during the implementation of the project. The composition of the various committees is provided in Annex J.

47. Through the mechanisms that were put in place, the project was able to channel upstream policy inputs through the NSC to the Cabinet Committee on Highlands and Islands (CCHI; later replaced by the Cabinet Committee on National Physical Plan). In addition, the SSCs and CCCs that were established under the project facilitated cross-sectoral exchanges and vertical linkages at the State and local levels. Thus these bodies made a significant impact in terms of facilitating collaboration and also activating local community ownership and awareness of the importance of marine resources management. Such collaboration is essential in the small island context, since the involvement of a number of State agencies and local authorities that have different jurisdictions is required in order to address threats that cut across the land-sea interface.

Table 2: Project Structures for Stakeholder Coordination and Engagement

	Group/ Entity	Members	Chair/Organizer	Frequency of meetings
1	NSC	<ul style="list-style-type: none"> Relevant federal agencies Representatives from State Economic Planning Units Representatives from CCCs Academia Tour operators NGOs 	Secretary General of NRE	Biannual
2	SSC	<ul style="list-style-type: none"> Relevant federal and State agencies Representatives from Local Authorities Representatives from CCC 	State Economic Planning Unit Director	Biannual
3	CCC	<ul style="list-style-type: none"> Community members and leaders Led by a committee comprising 12 people with representatives from the community, DMPM, District Office and Municipal Council 	Committee head	Quarterly
4	Advocacy groups (Reef Rangers and Reef Watchers)	<ul style="list-style-type: none"> Community members Private operators 	DMPM	Ad hoc basis
5	Business cooperatives	<ul style="list-style-type: none"> Community members and leaders 	CCCs	Ad hoc basis

48. To ensure the permanent institutionalization of these bodies, it is suggested that preparation of a

roadmap might help to identify how the various stakeholders will continue to play a role in contributing towards enhanced MPA management in the future.

6. UNDP Comparative Advantage

49. UNDP is one of three of the original Implementing Agencies, and one of the ten development agencies currently designated as Implementing Agencies of the GEF. For UNDP, the GEF Instrument states that...

“UNDP will play the primary role in ensuring the development and management of capacity building programs and technical assistance projects. Through its global network of field offices, UNDP will draw upon its experience in human resources development, institutional strengthening, and non-governmental and community participation to assist countries in promoting, designing and implementing activities consistent with the purpose of the GEF and national sustainable development strategies....”

50. As discussed in the GEF guidance document on the subject,¹⁰ one of UNDP's core strengths is its ability, through its network of country offices, to work with governments to mainstream global environmental issues into broader sustainable development programs.

51. As a technical assistance project that had as its goal the conservation and sustainable use of marine biodiversity, as well as sustainable island development, clearly the Project was well-aligned with the comparative advantages of UNDP as described above. In addition, capacity-building initiatives, aimed at strengthening the newly-formed Department of Marine Parks Malaysia at the National level, and resulting in the creation and effective operation of various bodies to coordinate efforts of stakeholders at the State and local levels, also illustrate the Project's consistency with UNDP's areas of comparative advantage. Finally, through components aimed specifically at achieving and advocating policy-level outcomes, the project sought to improve the mainstreaming of marine park protection and management within various policy and planning instruments. These elements of the Project design also support UNDP's defined areas of comparative advantage.

7. Linkages Between the Project and Other Interventions within the Sector

52. In addition to the relationships described in Section III.A.2, above, the Malaysia marine park biodiversity conservation project also has linkages with several other projects in the region. The DMPM sits on the technical committees of the Bay of Bengal Large Marine Ecosystem, and the Coral Triangle Initiative (CTI).

8. Management Arrangements

53. The management arrangements that were instituted for the project were quite innovative and effective, in that they enabled bi-directional vertical linkages at many levels. As discussed in the project document, the project was able to channel upstream policy inputs through the NSC to the Cabinet Committee on Highlands and Islands (CCHI; later replaced by the Cabinet Committee on National Physical Plan). In addition, the SSCs and CCCs that were established under the project facilitated cross-sectoral exchanges and vertical linkages at the State and local level. Perhaps one minor weakness exhibited in this arrangement was that issues of concern at the community level were not always elevated by the CCCs, to the level of the SSCs, for further consideration and support. In the course of the consultations for the TE, the suggestion was made that this problem could perhaps be addressed by convening special meetings of the SSC as required, and inviting appropriate

¹⁰ GEF/C.30/9. November 7, 2006. GEF Council December 5-8, 2006. Agenda Item 17. Roles And Comparative Advantages Of The GEF Agencies.

spokespersons from the CCC to explain their concerns and solicit help from authorities at higher levels in resolving critical issues. The management structure also accommodated good coordination between the EA (UNDP) and the IA (DMPM). The overall management structure of the project is shown in Figure 4.

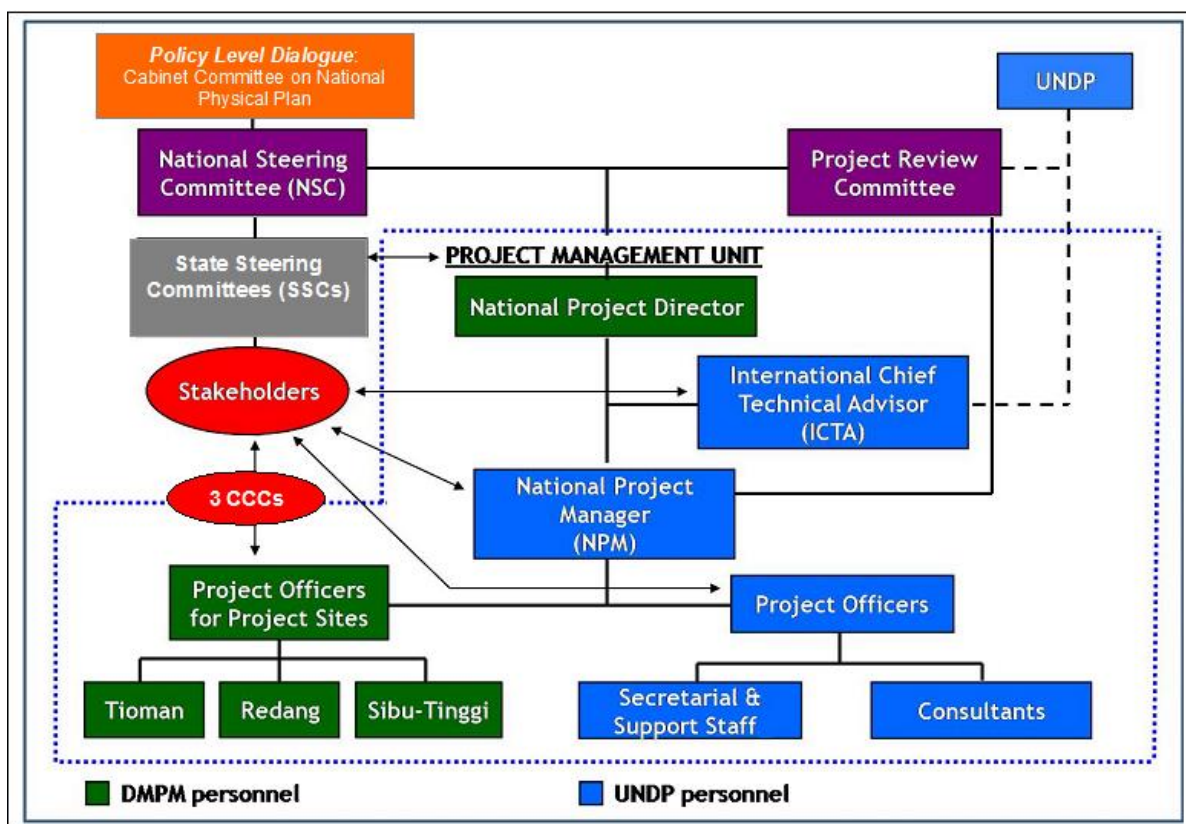
B. Project Implementation

1. Management by UNDP, Implementing Agency, and Other Partners

54. Overall, the DMPM performed well in the implementation of the project, especially in the latter half of the project implementation timeframe. As earlier described, serious delays had occurred in the start-up of the project. In November 2010, a new project manager was hired, who was able to institute more efficient project management procedures, that successfully brought the project back on-track and helped to accelerate progress in meeting most of the project outcome targets.

55. Another strength of the DMPM management was in absorbing and regularizing key project personnel within the DMPM's permanent staff. This was the case with several of the project's on-site managers, who then became part of DMPM's full-time technical staff. This helps to ensure that the project's achievements will be carried forward and sustained in the future, and that project lessons can be more easily applied and replicated at new sites in the future.

Figure 4. Project Management Structure



Source: Adapted and updated from Project presentation materials.

56. The DMPM Project Director reported that UNDP maintained a close working relationship with

DMPM and was effective in project oversight. Among the primary conduits for interaction between UNDP and DMPM were regular Project Review Committee meetings, and periodic budget review and approval activities. UNDP support also included providing UMPM with advance notice when documents and reports were required, and providing samples of relevant documents as templates.

57. One aspect of project management in which significant weaknesses were noted, was in the contracting of consultants. In addition to the delay in hiring that has already been mentioned, it was reported that the performance of the consultants, throughout their contractual engagement, did not always meet expectations. Some of the consultants on the team performed well (especially the tourism consultant and the social/livelihood consultant). However, in some cases, the consultant/contractor failed to submit satisfactory products, even after repeated requests by DMPM for revision. No clear mechanism was employed to require the replacement of consultants who did not perform satisfactorily, or to add required expertise to the consultant team. This very much weakened a number of the products that were developed under the project. The three MPA management plans are a notable example.

2. Monitoring and Evaluation

a. Indicators and Baseline Data

58. Effective monitoring and evaluation of project performance was significantly hampered by weaknesses in indicators and baselines, as have already been described at length in Section III.A.2., and in Annex I.

59. According to the PIRs (PMU 2012), indicators developed at the inception phase were continuously applied throughout the project implementation, even though it had been recommended that they should be modified for easier monitoring during the MTR. The inception report highlighted that the indicators were incorporated into the PMIS. From the PIR, (2012), it is not clear how the baseline data were established.

60. One deficiency relating to this, and recognized by project managers, was a lack of hard biological data to inform protected area management decision-making, and to measure environmental improvements that might be attributable to project actions. Some efforts were undertaken to correct this. In September 2009 a decision was made to begin monitoring along permanent coral reef transects using standard, scientifically-accepted methods.¹¹ It was also decided that a Working Committee for Coral Reef Monitoring should be established to coordinate monitoring activities in Marine Parks; the committee was formed, and met shortly thereafter. While the data that were gathered from subsequent transect surveys were helpful in measuring coral reef ecosystem health, it was still not clear how much the project might have contributed towards bringing about some reported improvements in coral cover. Possibly, this was due to the fact that data from the initial baseline surveys (performed by Coral Cay) and subsequent surveys were not directly comparable, and thus not easily applicable for this purpose.

b. Project Reviews and Reporting

61. There were mainly two types of reports produced under the project. Project Management Reports (PMR) included Annual Project Implementation Reviews (PIRs) or Annual Progress Report (APRs), Quarterly Progress Reports (QPRs), Inception Report (IRs), the Mid-Term Evaluation Report (MTR) and meeting reports from the Project Review Committee (PRC) and National and State Steering Committee (NSC and SSC) meetings. Project Output Reports (PORs) included technical reports and publications aligned to the project outcomes. These included stocktaking reports, management plans, business plans, etc. Listings of both types of project reports are included in Annex B.

¹¹ Line Intercept Transect (LIT) method as documented in English et al. (1997), as well as ReefCheck surveys done by ReefCheck Malaysia.

62. A review of the PMR reports indicated the existence of a systematic process of reporting in place with frequent and consistent production of progress and financial reports. In addition, as the secretariat to the NSC and SSC, the PMU also provided detailed records of the committee minutes, which went beyond the reporting requirements.

c. Tracking Tool

63. For monitoring management effectiveness at each of the three Marine Parks, the GEF Management Effectiveness Tool (METT) had been completed, most recently in March 2013 for the final evaluation.

64. The METT results indicated that, in general, the Marine Parks were being effectively managed. Table 3 summarizes the main issues that were identified at each site through use of the METT.

Table 3 General Findings of Tracking Tools (METT) March 2013

Issue	Marine Park Site		
	Redang	Tioman	Sibu-Tinggi
Key weaknesses/ threats	<ul style="list-style-type: none"> • Fishing threat (moderate) • Tourism development threat (high) • Erosion (medium) • Design of protected area (could be improved) • Research not focused on PA management needs 	<ul style="list-style-type: none"> • Tourism development threat (increasing) • Sewage and wastewater threat (high) • Garbage and solid waste threat (medium) • Heat and light pollution (medium) • Flooding (medium threat) • Loss of traditional knowledge (medium) • Research not focused on PA management needs 	<ul style="list-style-type: none"> • Garbage and solid waste (medium threat) • Research not focused on PA management needs • Staff numbers below required level
Key strengths/ benefits	<ul style="list-style-type: none"> • Management plan • Adequate information for decision making • Adequate staffing • Cooperation between land and water users • CCC acts as liaison between managers and community • PA activities yield economic benefits • Fees adequate for operation • Biodiversity intact 	<ul style="list-style-type: none"> • Adequate staff capacity and skills • PA boundary is known (but not demarcated) • Existing management plan • Work plan implemented • Adequate protection • Adequate budget • Strong education and awareness program • Interest in linking land use planning to PA management • PA activities yield economic benefits 	<ul style="list-style-type: none"> • PA management carried out according to agreed objectives • Work plan implemented • Budget management is excellent • Good M&E system • Collected fees contribute substantially to PA and environs • Biodiversity is intact

65. As part of the evaluation, the TE consultants were requested to validate the results of the tracking tools. The validation was done by “spot-checking” the METT results during meetings of the community consultative committees. CCC participants were asked to give their opinions about the key issues identified in the METT (as reflected in Table 3, above). Their responses appeared to corroborate the findings of the METT with a fair degree of accuracy, thus it was judged that, in general, the results of the METT evaluation process were valid.¹²

¹² In order to do a comprehensive validation, detailed consultations, possibly augmented by field surveys, would have been required. This was not possible within the time and budget that had been allocated during the TE. Therefore the

3. Adaptive Management of the Project

66. Various adaptive management measures were undertaken during the project. These were measures that were undertaken opportunistically, in response to both favorable and unfavorable factors. Some of these adaptive measures included the following:

- The original project document contained 40 outputs that were later reduced to 10 outputs in the new project logical framework to simplify the delivery of the outputs.
- In the absence of site-specific biological data, Local Environmental Knowledge (LEK) exercises were undertaken to support the development of the three Management Plans. ReefCheck Malaysia was engaged to conduct coral reef resilience study at the project sites.
- The project adapted to the opportunities that arose and gained from cost savings by utilizing disposed vessels offered by MMEA as artificial reefs.
- The component on tourism presented underlying challenges that proved difficult to overcome; bottlenecks arose that were beyond DMPM's control. Adaptation was made to focus on engagement of the tourism sector through awareness measures towards environmental best practices. Despite this adaptive approach, in this instance, the key issues affecting sustainable tourism, such as waste and sewage management, still persist.
- Regarding enforcement, the project adapted by enhancing the training provided to field officers by according the trained officers arresting powers that were not stipulated as part of the project. As a result, DMPM has gained a significant number of officers with arresting powers.
- Due to a major coral bleaching event in 2010, DMPM played a key role in developing a coral reef bleaching response plan that has now become a product of the project.

4. Financial Management

67. The project had a total funding of US\$4,130,294 including both cash and in-kind contributions (Table 4). The total planned GEF contribution was US\$2,127,150 and by June 2013, the project had spent US\$2,121,137, amounting to a budget utilization rate of 99.7% from FY2007-2013. To the extent that expenditures can be used as a basis for measuring project progress and efficiency, this indicates an overall efficient spending and progress achievement rate.

68. In terms of total project expenditures, as of June 2013, the actual spending on the project had reached US\$5,439,990, approximately 32% beyond the planned allocation. This was mainly attributed to the increased GoM cash allocation from US\$1,012,229 to US\$2,183,882 and GoM in-kind contribution from US\$225,000 to US\$369,056. The overall GoM contribution showed a marked increase by approximately 71% from US\$1,276,339 to US\$2,183,882, demonstrating the GoM's strong commitment towards MPA management in Malaysia.

69. The expenditure of GEF funds began with a slow start in 2007 and 2008 with the annual expenditure rates for these years well below 50% (Table 5), as compared to the proposed budget set out in the Project Inception Report (GoM, UNDP, GEF 2007). This low utilization rate reflects delays due to the slow start-up of the project, and long processes involving the engagement of the consultants. Project expenditure started to pick up from 2009 onwards. Expenditures in Years 4 and 5 were beyond the proposed budget, due to efforts to bring project activities up to speed. The original proposed budget did not report figures for 2012 and 2013, since those years represented an extension (up to June 2013) as compared with the original planned project.

70. Over the course of the project, two audits were undertaken by the National Audit Department in

much more informal process described here was employed. As should be apparent, the results of such a process are inherently subjective. Thus more rigorous scientific validation of the METT results would be desirable.

2010 and 2011 for the project periods 2009 and 2010, respectively (National Audit Department 2010 and 2011). The scope of the audits covered financial aspects such as financial regulations, rules, practices and procedures; and management components such as project implementation arrangements, administration, monitoring, evaluation and reporting provisions. For both years, the project was accorded 'fair' certifications in terms of Combined Delivery Report, Statement of Cash and Assets and Equipment. The risk severity for the issues raised ranged from low to medium without any major issues being raised. Some of the issues raised included effectiveness of document control, fixed asset register and asset tracking register, maintenance of records, payment to third parties and authorization of implementing partner. The audits called for better monitoring and guidance at the project level and also UNDP Country Office level. Indications from the Project Review Committee minutes (PRC minutes 250608) demonstrated that the issues were noted and recommendations acted upon.

Table 4: Sources of Counterpart Resources

Co-financing (type/ source)	GEF (US\$)		Government (US\$)		Partner Agency (US\$)		Private (US\$)		Total (US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Cash	1,952,400	1,946,387	1,012,229	2,183,882			30,000	30,000	2,994,629	4,160,269
* In-kind support *PDF A	25,000	25,000	225,000	369,056			689,655	689,655	939,655	1,083,711
* in-kind (PDF B)	149,750	149,750	39,110	39,110	7,150	7,150			196,010	196,010
Totals	2,127,150	2,121,137	1,276,339	2,592,048	7,150	7,150	719,655	719,655	4,130,294	5,439,990

Source: Combined delivery reports (CDR), 2007-2012, Project Document, Annual Work Plans (AWP) 2007-2013.

Table 5: Disbursement of GEF Funds (US\$), by Year

Year	Proposed Budget	Actual Expenditures	Percentage expenditure (of proposed budget)
2007	388,180	164,091	42.3
2008	823,680	119,962	14.6
2009	313,180	262,574	83.8
2010	166,180	472,171	284.1
2011	261,180	304,049	116.4
2012	-	313,986	-
2013	-	309,575	-
TOTAL	1,952,400	1,946,408	99.7

Source: GoM, UNDP, GEF (2007).and summary of expenditure (2007-2013)

Note: The GEF expenditure for 2013 is an estimate.

C. Results

1. Attainment of Objective and Outcomes

a. Project Objective

Description

71. The stated objective of the project was to achieve enhanced marine park management and inclusive sustainable island development. The accomplishment of the seven targeted project outcomes was expected to contribute to the realization of the project objective.

Evaluation

72. Implied in the statement of the project objective for inclusive sustainable island development, is a focus on the involvement and participation of a wide spectrum of stakeholders. The Project was very successful in this regard, achieving significant community participation through its awareness-raising activities and livelihood initiatives. The project produced attitudinal changes which were consistently reported during the course of the terminal evaluation—starting from very low levels of awareness before the project, community members gradually came to adopt a position whereby they regarded the unique marine biodiversity in their immediate environs as their personal heritage. This change in attitude also translated into behavioral changes, with greater attention being paid to such actions as waste minimization, pollution prevention, and physical protection of coral reefs (e.g., against anchor damage). Complementing these actions was a reduction in fishing pressure, that was fostered through the creation of alternative livelihood opportunities, especially in tourism. One area in which community engagement could have been further strengthened however, was in the formulation of MPA management plans.

73. Improvements in enforcement were also significant, with additional enforcement officers trained and certified to make arrests and seizures. Production of an enforcement manual that details standard enforcement procedures is another output of the project that will help to guide and sustain improved enforcement efforts in the future.

74. The overall rating given for attainment of the project objective is **Satisfactory (S)**.

b. Outcome 1: Planning

Description

75. This project outcome placed emphasis on “adaptive marine park management by a mechanism of cross-sectoral information sharing and knowledge transfer into decision-making bodies.” As such, this component of the project featured:

- the establishment of the National Steering Committee and three State Steering Committees;
- creation of a marine park management information system (MPMIS), intended to provide the capability of sharing data across multiple sectors; and,
- the development of three management plans for the three marine protected areas as a key element.

Evaluation

76. The NSC and SSCs proved to be effective bodies for facilitating cross-sectoral exchanges and

vertical linkages at the Federal and State levels. However, some agencies were less engaged than expected and desired. For example, there were difficulties in engaging MoTOUR in accepting the proposed eco-certification scheme for tourism operators. In addition, frequent changes in representatives to various committees made their functioning less efficient. Nonetheless, these bodies generally made an impact in terms of promoting collaboration between various government agencies. Because these entities proved effective, it has been recommended that they be continued. Accordingly, this component is given a rating of **Satisfactory (S)**.

77. An extensive MPMIS was established, with a demonstrated capability for sharing of data across all sectors. However, there is a need to further validate much of data content that has been uploaded to the MPMIS thus far. For example, data based on use of the LEK approach needs further validation and ground-truthing. The broader application of the system, across a range of sectors and agencies, also needs to be further promoted, developed and extensively tested. This component is rated as **Satisfactory (S)**.

78. Management plans were also formulated for each of the three Marine Parks—at Pulau Redang, Pulau Tioman, and Pulau Sibu-Tinggi. However, as has been previously mentioned, the data that were used for the development of the plans came largely from application of a LEK approach. This approach was applied due to the absence of comprehensive hard data on the biology of the sites. This element is rated as **Marginally Satisfactory (MS)**.

79. Overall, this outcome is given a rating of **Satisfactory (S)**.

c. Outcome 2: Policy

Description

80. For this outcome, the expected benefits are categorized in two “output themes”, one for establishing mechanisms for effective multi-sectoral policy-making and development planning, and a second for ensuring improved financial sustainability. Contributing to this outcome were the following:

- establishment of the NSC, and 4 SSCs (3 at project sites, and 1 at a replication site [Kedah]), which enabled cross-sectoral decision-making and inputs for policy-making at the Federal and State level;
- addendum to the 2nd National Physical Plan;
- advocacy for passage into law a Marine Parks Act;
- identification of additional revenue streams to support marine park management, including charges for research, berthing of vessels, camping, and filming;
- developing other livelihoods that could directly or indirectly produce additional revenues; and
- steps taken toward revising the Marine Parks Trust Fund, and improving efficiency of park fee collection.

Evaluation

81. The reasonably smooth functioning of the steering committees at both the Federal and State levels has already been described. The DMPM successfully collaborated with the Department of Town and Country Planning for inclusion of a chapter on marine parks within the 2nd National Physical Plan. While the Marine Parks Act is yet to be passed into law, this has been drafted and is awaiting further review in the legislature. Therefore the TE consultants give a rating of **Satisfactory (S)** for the policy-making/development planning theme in this component.

82. For financial sustainability, some progress was made on a number of fronts, especially in

identifying new potential sources of revenue that were approved at cabinet level, and in promoting alternative livelihoods that could also generate new revenue to support marine park operations. However, proposed changes in fee collection are yet to be implemented, to allow sufficient transition time. Provisions also need to be incorporated into the Trust Fund mechanism, to enable collected fees to be retained on-site. The financial sustainability theme is therefore rated as Marginally Satisfactory (MS), and the overall rating for this outcome is **Satisfactory (S)**.

d. Outcome 3: Local Communities

Description

83. The expected results for this outcome, categorized within two output themes, were (1) to involve local communities in marine parks management, and (ii) to ensure that the benefits of biodiversity conservation be shared with communities by generating alternative livelihoods. Given the fact that park management in Malaysia has historically followed a top-down approach, the inclusion of communities as key stakeholders is considered to be an innovative measure.

Evaluation

84. One of the major accomplishments of the project with respect to community involvement was the successful establishment of Community Coordinating Committees (CCCs) in all three sites. Replication of the CCC was also initiated for Pulau Perhentian. The CCCs served as a conduit for information exchange between the communities, the DMPM, and the project. Community members also provided input into park planning through the use of a “local ecological knowledge” approach to information-gathering. Despite such activities, however, community stakeholders described their involvement in the Marine Park management planning process as being quite limited. This may have been based on the fact that, while community members provided information and input that was used for planning, the actual development of the management plans was left to others (e.g., project personnel).

85. The project actively promoted and supported the uptake of alternative livelihoods. Two Cooperatives were established, at Redang and Tioman, as part of the platform to rally the local communities to participate in economic activities. Three business plans were developed in 2012 for the projects sites. Various trainings for different demographic groups, including for women, were conducted with funds from the project and also from co-financing sources. Support for communities has been added as a recurring item in the budget of DMPM.

86. Both themes, and the overall outcome for communities, are given a rating of **Satisfactory (S)**.

e. Outcome 4: Tourism

Description

87. The desired outcome for this component was for tourism operators to play an integral role in protected area management, and to reduce the direct and indirect impacts of tourism activities on marine biodiversity. The indicators for accomplishment of the output were based on development of environmental infrastructure (such as wastewater treatment plants to minimize discharge of pollutants into the sea by resorts) and on expenditures by tourism operators to improve their environmental performance.

Evaluation

88. While a number of positive accomplishments were realized for this outcome, significant setbacks

were also experienced. Examples of some of the key developments related to this outcome are presented here.

- An eco-certification scheme was developed under the project, and an Environmental Best Practices booklet was produced. Training on eco-rating was conducted for tourism operators at the 3 project sites. The issue of formally adopting the eco-certification scheme was raised during an inter-ministerial problem-solving meeting, however, the eco-ratings have not yet been endorsed by the Ministry of Tourism.
- An underlying difficulty for many resort operators is the fact that they do not have title to the land on which they operate, and also lack an environmental Certificate of Fitness. These factors deter them from making the long-term investments in infrastructure improvements that would be needed to ensure better environmental performance. The Certificate would also be a prerequisite for obtaining eco-accreditation.
- Leadership among tourism operators was not always sufficient to bring about tangible improvements. For example, 5 resorts in Redang failed to connect to a new wastewater treatment plant, due to lack of trained operators. Similarly, since 2008, the Tioman Development Authority has been promoting several environmental improvement initiatives among resort operators. One example is for the collection and disposal of waste oil. However, resort operators have only shown limited receptiveness to such efforts.
- The Pulau Redang community has advocated limiting the scale of tourism development on their island. A resolution was passed allowing only 5-star development. An 80-room mass tourism facility that did not meet the standard was torn down.

89. The importance of tourism development in the social and economic life of the marine park islands cannot be overstated. The TE team heard several reports of the fact that, with increased jobs creation, young people who would have otherwise left the islands are able to stay in the community, and work close to home. However, tourism development, without proper controls, threatens to impair environmental quality, including the biodiversity within the marine parks. Many of the cases cited above illustrate the fact that efforts to improve cooperation between tourism operators and MP managers have only had limited traction. Accordingly, this outcome is given an overall rating of **Marginally Satisfactory (MS)**.

f. Outcome 5: Enforcement

Description

90. This outcome was intended to strengthen such activities as monitoring, control and surveillance, to meet international standards of protected area management and achieve efficient enforcement and prevention of violations.

Evaluation

91. Significant progress was achieved in meeting the targets for this outcome, as reflected in the following successes:

- Trends of arrests within the MPs were reported to be decreasing, due to project programs implemented with fishermen, and through stakeholder consultations.
- In addition, an enforcement manual was produced that lays out standard operating procedures to be followed for enforcement.
- The capacities for enforcement were increased—a complement of 156 staff received training for manning the Marine Park patrol boats.

- Previously, only a limited number of personnel had the skills and knowledge to qualify to be given the authority to make arrests; this has been increased five-fold.
- In Pulau Tioman, community members have been engaged to act as the ‘eyes and ears’ for enhancing enforcement effectiveness in the coastal waters around the island.

92. Offsetting these accomplishments is the fact that small-scale fishing violations continue to occur within the 2-nm prohibited fishing zone. This reflects the fact that community “buy-in” for the concept of strict protection within the Marine Parks is still incomplete. Community members would like to see more flexibility in the zonation of uses within the Marine Parks, enabling them to fish (both for subsistence and for tourism-related recreational purposes) within certain parts of the 2-nm zone.

93. Despite the minor violations that persist, the TE team determined that the accomplishments toward improved enforcement were significant, and thus a rating of **Highly Satisfactory (HS)** is given for this outcome.

g. Outcome 6: Awareness

Description

94. For this outcome, the project sought to raise awareness of the importance and benefits of marine biodiversity conservation and the marine park system in Malaysia, among selected target groups. The baseline measurement of awareness indicated that around 20 percent of respondents had a reasonable (“moderate” or higher) level of awareness and understanding of marine parks issues. The target accomplishment for this outcome was achieve similar levels of awareness among 50 percent or more of respondents.

Evaluation

95. Within the coastal communities of the marine park islands, significant improvements were made during project implementation in the awareness of biodiversity and conservation issues. Stocktaking findings indicated an awareness level among locals was 61 percent. A survey under the ReefCheck Marine Education Program indicated 93 percent awareness of such issues among school children as of June 2010. Efforts such as the Rakan Park awareness campaign, Marine Awareness Seminars, Reef Watchers training, development of a communications plan, and collaboration with the National Film Department of Malaysia have resulted in increased awareness, both among community members, and the general public.

96. Awareness was also raised through the numerous livelihood and skills training activities that were conducted under the project. Some of these, such as snorkel guide training, were intended to raise awareness among operators in the tourism sector. Others, such as capacity building for enforcement officers, raised awareness among government personnel.

97. One of the most compelling views consistently voiced by community stakeholders during the course of the TE investigations was the fact that, due to their increased knowledge about the marine and coastal environment, they now consider the marine resources as their ‘heritage’ and are more committed to protecting these assets, as the basis for their livelihood. In addition, it was reported that due to project efforts, greater awareness was developed among State agencies of the need for improved conservation of marine biodiversity.

98. Against these strengths, a few weaknesses were also reported. Despite putting a strong emphasis on Malaysia’s natural beauty and abundance in the well-known “Malaysia, Truly Asia” marketing campaign, MoTOUR has been slow to pick up the importance of supporting marine

biodiversity conservation as a foundation for sustainable tourism, reflecting a need for further awareness-raising. Also, in the analysis conducted during the MTR, a rating of only “Moderately Satisfactory” was given for this outcome. This was based on the finding that, despite the increased acceptance among local communities for the MPA, the understanding of basic coral reef ecology, as a foundation for more effective MP management, was very limited.

99. It may be true that a more technical understanding of marine ecological principles is still quite limited at the community level (and even at higher levels), and certainly, more attention should be paid to improving this in future awareness campaigns. Nonetheless, strong progress has been made in the project toward advancing the understanding and awareness of a broad range of stakeholders regarding the importance of marine biodiversity conservation and more effective marine park management. Taking the aforementioned factors into consideration, the evaluation rating given for this outcome is **Highly Satisfactory (HS)**.

h. Outcome 7: Advocacy

Description

100. This outcome focused on improving advocacy for the sustainable use of marine biodiversity, and for stronger conservation efforts within the marine parks of Malaysia. The key indicator for this outcome was for the establishment of watchdog mechanisms or institutions to promote the establishment and effective management of marine protected areas.

Evaluation

101. The project was quite successful in promoting advocacy, by establishing and operationalizing mechanisms for governance, information sharing, and strengthened community support. Specific examples of project actions that helped to advance advocacy are as follows:

- The formation of the NSC, SSCs and CCCs allowed for issues of concern at the community level to be elevated to a higher level for attention; and
- Rakan Park (in Tioman) and Reef Rangers (in Redang) were formed to conduct advocacy and awareness-raising activities, and were quite effective in these functions. They are also involved in physical coral reef conservation efforts such as reef clean-up, beach clean-up, and crown-of-thorns culling. The idea for the Rakan Park conservation group was adopted and incorporated into the Ministry of Environment “Friends of Environment” program.

102. The successful establishment of the advocacy groups mentioned exceeded the targets that had been set for the project. This outcome is given a rating of **Satisfactory (S)**.

i. Summary of Evaluation of Outcomes

103. Based on the foregoing discussion of project performance in achieving the targeted objective and outcomes, a summary evaluation matrix has been prepared, and is presented in Table 6, below.

2. Relevance

104. Examining the relevance of the project begins with looking at the project rationale and justification, and then analyzing its consistency with global, regional, and national government priorities for marine biodiversity conservation.

105. As mentioned in the Introduction section, the marine biodiversity of Malaysia is globally significant. The diversity of corals and fishes is high, being equal to about 80 percent of the total species found in an equivalent area in the “Coral Triangle” for each of these taxa. In addition, other key rare and vulnerable species, including sea turtles and dugong, occur and breed in Malaysia’s waters. These biodiversity components, along with other important marine and coastal ecosystems such as mangrove forests and seagrass beds, are well represented in the marine park project sites. Thus the global importance of these sites for the conservation of marine biodiversity resources is evident.

106. The project is supportive of GEF’s Objective 1 for Biodiversity, to Improve the Sustainability of Protected Area Systems, and is highly consistent with and supportive of UNDP’s global role to promote capacity-building and provide technical assistance, foster non-governmental and community participation, and promote national sustainable development.

107. As far as consistency with Malaysian national policies, plans, and laws is concerned, through discussions with the NSC, and through advocacy efforts of the project, an addendum chapter on marine parks was contributed to the 2nd National Physical Plan. In addition, it is expected that significant contributions derived from the project, especially in the area of marine conservation, will be made to the Malaysia Biodiversity Policy, which is currently being updated. Finally, the project has made contributions to the drafting of a Marine Parks Act, which is pending passage by the legislature.

108. All of these factors exemplify the high degree of relevance of the project, which is accordingly rated as **Relevant (R)**.

Table 6. Summary of Evaluation of Project Objective and Outcomes

Component		Evaluation*					
		HS	S	MS	MU	U	HU
Objective	ENHANCED MARINE PARK MANAGEMENT AND INCLUSIVE SUSTAINABLE ISLAND DEVELOPMENT		●				
Outcome 1	PLANNING		●				
Output 1.01	Improved Information Management for Planning		●				
Output 1.02	Management Plans for 3 Project Sites			●			
Outcome 2	POLICY		●				
Output 2.01	Improved Consultative Policies		●				
Output 2.02	Improved Economic Policies			●			
Outcome 3	LOCAL COMMUNITIES		●				
Output 3.01	Improved Local Communities Consultation		●				
Output 3.02	Improved Local Community Alternative Livelihoods		●				
Outcome 4	TOURISM (Improved Tourism Sector Consultation)			●			
Outcome 5	ENFORCEMENT (Improved Enforcement)	●					
Outcome 6	AWARENESS (Improved Awareness of Benefits of Marine Biodiversity)	●					
Outcome 7	ADVOCACY (Improved Advocacy for Sustainable Use of Marine Biodiversity)		●				

* Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU)

3. Efficiency

109. Evaluation of the efficiency of the project requires examination of several factors, including the utilization of human and financial resources, timeliness, partnerships, linkages and leveraging.

110. During implementation, improved efficiency was achieved by not relying solely on project personnel to carry out project functions. The fact that the project stressed a participatory approach, and focused on developing strong ownership within the community, improved efficiency by involving local residents in project activities. Community members participated in the activities of the three CCCs, and engaged in project-supported livelihood activities. Community members also became involved in the project through Rakan Park (in Tioman) and Reef Rangers (in Redang), conducting advocacy and awareness-raising activities. Local community members served as the 'eyes and ears' for enforcement. The project also relied upon local ecological knowledge (LEK)—gathered from local participants—to furnish data for the MPA management plans.

111. Leveraging of funding is another area where the project achieved a good level of efficiency. While the GEF provided the core funding resources, GoM contributions were also significant, and in fact exceeded the expected government cofinancing contribution as described in the Project document. Other innovative leveraging benefited the project as well. For example, on orders of the court, the Maritime Enforcement Agency was mandated to confiscate and dispose of vessels engaged in illegal fishing operations. Through a cooperative arrangement with DMPM, the confiscated vessels were sunk and used as artificial reefs, for fishing, for recreational diving, and to create barriers to prevent illegal trawling. Using the confiscated vessels in this manner represented a substantial cost savings to the Department and to the project. Finally, the private sector also helped in leveraging project resources, by carrying out a variety of CSR activities aimed at coral reef conservation and environmental improvement.

112. Partnerships were developed between project proponents and other stakeholders as well. The involvement of academia and ReefCheck Malaysia as consultants to the project led to enhancement and replication of project activities.

113. One area where the efficiency of the project was jeopardized was in its timeliness. The project suffered a 2-year delay in start-up, and two extensions to the project implementation period were required. However, new project management personnel hired during the second half of the project were able to get the project back on-track and to rapidly accelerate the achievement of the intended targets.

114. Overall, the efficiency of the project was very strong, and is given a rating of **Highly Satisfactory (HS)**.

4. Country Ownership

115. An important result for UNDP-supported GEF-financed projects is that they address country priorities. Some aspects that are closely tied to country ownership have been highlighted in the section on Relevance (Section III.D.2., above). Further comments are offered below.

116. The project directly contributes to national priorities such as Malaysia's National Policy on Biological Diversity, 1998, the National Policy on the Environment, 2002, and at the same time supports aims encapsulated in the 10th Malaysia Plan, which states:

“The Marine Park Management Plan for Peninsular Malaysia and existing legislation will be reviewed to further enhance the management of marine biodiversity.”

117. In addition, the project is also aligned to the country’s Economic Transformation Program in supporting the Global Biodiversity Hub Initiative which endeavors to:

- Develop Malaysia as one of the world’s premium ecotourism destinations;
- Ensure standards of excellence in product packaging, service delivery and sustainable use; and
- Empower rural communities to help them move up the value chain.

118. With the advent of challenges in global commodity markets and depletion of non-renewable resources such as oil and gas, Malaysia’s rich natural endowments such as marine biodiversity, could potentially be an important driver for the country’s economic growth in the future (e.g., particularly for the tourism sector). As Malaysia is committed to a green economy with the vision to move beyond its status as a manufacturing hub, and establish “low carbon emissions, highly efficient use of resources, and a healthy, well-educated populace” (AFP 2011), the project strengthens Malaysia’s position in achieving the vision.

119. Finally, the government has maintained and exceeded its financial commitment to the project throughout the implementation period, and it is expected that it will continue to commit resources to support the project objective in the future.

120. In summary, the project demonstrates strong country ownership through its consistency with important plans and policies, at both national and state levels, as well international agreements, and through government’s continuing commitment of resources.¹³

5. Mainstreaming

121. Mainstreaming is demonstrated when projects yield collateral, cross-cutting benefits that extend beyond their focused sectoral objectives. For example, mainstreamed projects have the potential to positively influence job creation and poverty alleviation, improved natural resources management arrangements with local groups, resiliency to natural disasters, and gender balance.

122. Mainstreaming benefits of the project have come about in large part through the project’s livelihood generation activities, which are aimed directly at job creation and alleviating poverty. Livelihood activities under the project also proved to be an effective conduit for improving women’s quality of life, and giving them opportunities to play a more significant role in family and community life. Also, the improved management of coastal habitats such as coral reefs and mangrove forests can improve resiliency in the face of climate-related changes in sea level and extreme weather events that could affect coastal communities. In all these respects, the project has demonstrated that it is successfully mainstreamed.

6. Catalytic Role or Replication Effect

123. For many projects, there is an expectation that replication will only take place once the project has been concluded. In the current instance, the marine park project provided numerous examples of good practices and innovative approaches, that have already been replicated, expanded upon, or applied in other settings, by other stakeholders. In some cases, replication activities were implemented

¹³ The evaluations for country ownership, mainstreaming, and catalytic role are narrative only, and no evaluation rating is required.

with further project support and funding, while in other instances, replication simply proceeded in a spontaneous, catalytic manner. In the broadest sense, replication of project activities or approaches can strengthen, complement, or be synergistic with other ongoing activities that are intended to achieve similar targets. Several examples where project actions or approaches have been replicated are briefly described here:

- The idea for the Rakan Park (Friends of Park) conservation group was adopted and incorporated into the Ministry of Environment “Friends of Environment” program.
- Improvements in enforcement activities that were initiated within the project were replicated in other jurisdictions.
- A series of activities that were carried out as models in the project have been replicated in Perhentian island (Terengganu State). This included the establishment by “Ecoteers” of a Community Coordinating Committee, and the promotion of new livelihood opportunities. With funding through the GEF/UNDP Small Grants Programme, ReefCheck Malaysia is carrying out training for “dive and snorkel skills and awareness” that is similar to training that it conducted at the project sites. ReefCheck is also carrying out coral resilience studies at Perhentian and other sites, that will complement the resilience studies that were performed under the project. A MPA management plan, similar to those prepared for the three project sites, is being prepared for Perhentian.
- Borrowing from a business model that was set up under the project, a similar frozen food enterprise was established at a northern island site.
- Awareness-raising activities that were carried out under the project, including beach cleanup drives and coral reef cleanups, were adopted by corporate sponsors. The project continued to coordinate with corporate partners—the project communications plan outlines key performance indicators (KPIs) for completing at least four corporate social responsibility (CSR) activities per year.
- Local Ecological Knowledge (LEK) is a simple, cost-effective, and low-tech approach for gathering data, that was utilized in the absence of more technical “hard” data. After finding that LEK produced usable information in the project, DMPM replicated this approach at 24 additional sites. While such methods can be quite cost-effective, it must again be mentioned that information gathered in this manner should be further validated, and subjected to more thorough technical review.
- The MPMIS that was established as a dedicated database for marine park management, has been employed for broader purposes. It is also being used for issuance of e-permits, and for other administrative functions of the DMPM.
- Establishment of an MPA State Steering Committee, modelled after the project’s SSCs, was initiated for the state of Kedah in 2012.
- The project’s Communications Plan is being used by DMPM for all MPAs in Malaysia.

124. The examples cited above highlight the fact that the project has already played a catalytic role, with replication of activities piloted in the project already taking place. It is thought to be quite likely that many of these activities will continue to be sustained in the future.

7. Sustainability

Description

125. For the purposes of this TE, sustainability is defined as the likelihood of continued benefits after the project ends.¹⁴ Evaluation of sustainability considers the financial, socio-political, institutional, and environmental risks that may affect it. The analysis that follows takes each of these aspects into account.

Evaluation

Financial Sustainability

126. There are good prospects that sufficient financial resources will be available to support continuing effective marine park management after the termination of the project. Multiple financing streams have been identified and are available to support sustained management of the parks. Regular government budget allocations to the DMPM are sourced at both the Federal and State levels.

127. The Marine Park Trust Fund is another available source of financing. Currently there is a MYR 5 user fee charged to local visitors, and a fee of MYR 30 to foreigners, which are deposited into the Trust Fund. Increases in the user fees are being considered. The Trust fund also receives contributions from other sources (e.g., the private sector).

128. Additional revenue streams to be tapped include fees for dive operations, research, berthing of vessels, camping, and filming. Existing funding is also leveraged through cash and in-kind contributions coming from the private sector (e.g., through CSR activities), NGOs, and other stakeholders. Voluntary contributions are another potential source that could be exploited, and growth of tourism offers the prospect of additional revenues being generated through tourist taxes or other fees.

129. Because the financing for marine park conservation activities currently being provided is adequate, and the potential for increasing future funding from a variety of sources is substantial, the financial sustainability of the project is rated as **Likely (L)**.

Socio-Political Sustainability

130. Under this project, one of the outstanding achievements has been the change in the level of engagement of communities—from virtually no community involvement at the beginning of the project, the awareness of communities regarding marine conservation issues has been increased dramatically. Community participation and ownership, and willingness to assume responsibility for the stewardship of natural resources within the marine parks, has been significant. This social aspect is also being supported in the financial dimension—the DMPM established a new budget line for community development, and such support should be maintained until communities achieve greater financial self-sufficiency.

131. The formation of CCCs and SSCs provides a mechanism for cross-sectoral consultation among various local stakeholders. Community leaders are active in the CCCs and SSCs, and plans for continuing these coordinating bodies are being discussed.

132. Under the Advocacy outcome of the project, groups were formed to promote improved marine biodiversity conservation. These included Rakan Park on Tioman and Reef Watchers on Redang.

¹⁴ UNDP 2012 Guidance.

These groups have continued to be effective in conducting advocacy and awareness-raising activities. The idea for the Rakan Park was also adopted and incorporated into the Ministry of Environment “Friends of Environment” program.

133. It is expected that local NGOs (e.g. Reef Check, MENO, WWF-Malaysia, MNS) will also play an important role in the sustainability of the project objective. In particular, ReefCheck Malaysia is very active in coral reef management in Eastern Peninsular Malaysia, and it is quite likely that it will continue in this role.

134. Because the foundations for strong community participation have been well established, the socio-political sustainability of the project is given a rating of **Likely (L)**.

Institutional Framework and Governance

135. Another area in which the project made good progress was in the establishment of permanent and sustainable institutional structures for marine parks management. As the lead agency for these activities, the capacity of DMPM has been significantly strengthened through the absorption of previous Project personnel. Under the project, DMPM personnel also received a variety of training, which strengthened their skills and knowledge. Still, there is room for further improvement, especially in technical areas, and it will be essential that marine parks staff receive continuing training in marine biology, conservation, ecology, and enforcement, in order to ensure that DMPM will be able to effectively fill its mandate.

136. The formation of coordinating bodies at all levels—Federal, State, and community—that was achieved under the project provides an effective mechanism for cross-sectoral coordination, as well as vertical coordination. Efforts are being undertaken to ensure that these coordination bodies will be maintained.

137. While some progress has been made toward passage of a Marine Parks Act, advocacy for this must be pursued. Having such an Act will be vital in giving DMPM the legal mandate that it needs to be able to address such fundamental issues as financing, staffing, and enforcement over the years ahead.

138. Taking the above-mentioned factors into consideration, it can be concluded that, while excellent progress has been made toward building durable institutions for marine parks management, some risks remain. Therefore, the rating given for institutional sustainability is **Moderately Likely (ML)**.

Environmental Sustainability

139. In terms of environmental sustainability, the project was successful in reducing some fisheries-related stresses on biodiversity resources. Risks of other environmental stresses still exist, such as climate change-related impacts, periodic Crown-of-thorns starfish infestations, and marine pollution from external sources (among others). Perhaps the most significant risk is posed by continuing growth of the tourism industry. If environmental risks are to be avoided, the growth of tourism needs to proceed according to the ecological carrying capacity of each site, with appropriate infrastructure and facilities put in place to adequately manage solid waste and wastewater that could otherwise adversely affect the sensitive marine ecosystem. In addition, gaps are evident in compliance with State environmental regulations by resort operators. Therefore, efforts need to be strengthened to ensure that environmental standards and regulations that pertain to coastal resorts (e.g., for solid waste disposal and wastewater discharge) are being more effectively applied and implemented. The formal adoption of an eco-certification scheme for the tourism industry, which was one of the intended outputs of the project, would also help to support better environmental compliance.

140. Because of the risks associated with tourism operations on marine park islands, which are likely to continue to grow in the future, environmental sustainability is rated as **Moderately Likely (ML)**.

Overall Sustainability Rating

141. Since the cumulative rating for sustainability cannot be higher than the lowest rating for any of its component dimensions, the project is given a total sustainability rating of **Moderately Likely (ML)**.

8. Impact

142. Impact is one of the most important elements to consider in project evaluation, but often one of the most difficult to measure, especially for biodiversity conservation projects. This is because of the fact that changes to living systems usually occur over long periods of time—thus changes resulting from project actions are not necessarily expressed within the relatively short project timeframe. In such cases, rather than measuring the impact itself, at the time of project termination, it may only be possible to measure whether or not the project has set in motion processes, or created favorable conditions, that would encourage the realization of the intended project impact in the future.

143. The criteria that are examined in evaluating impact include (i) environmental status improvement, (ii) environmental stress reduction, and (iii) progress towards stress or status change. These aspects are discussed here.

Environmental status improvement

144. Some improvements in coral cover were recorded during the project implementation period. Based on the ReefCheck Malaysia status reports for 2011, live coral cover for Tioman and Redang islands were 48.93%, and 47.9%, respectively, as opposed the national average of 44.19%. The results varied, as in 2010, live coral cover for Tioman was reported to be 61% based on the ReefCheck findings. The reduction in 2011 may have been due to the mass coral bleaching incident in 2010. In another comparison, data from the baseline surveys done as part of PDF-B project showed coral cover of 35.1% in 2003, and this increased to 46.3% in 2012. Coral cover for the project sites is reported to be about 10 percent higher than the regional average. From anecdotal reports, it is observed that improvements in coral cover and fish abundance followed the implementation of protection, conservation and environmental measures.

145. While some of the data mentioned require further validation and corroboration, they do indicate a trend towards gradual improvement of coral reef condition. Using the three-point rating scale that is prescribed for evaluating impact (S=Significant; M=Minimal; N=Negligible),¹⁵ the environmental status improvement for the project is rated as **Significant (S)**.

Environmental stress reduction

146. Some progress has been made in reducing environmental stress. For a water quality monitoring program initiated under the project, to complement DOE marine water quality monitoring, sites were selected to provide a better picture of potential impacts (i.e., using sampling points closer to areas of human use and ecological sensitivity). Moderate reduction of stress has also been achieved through substituting alternative livelihood activities (tourism) for capture fisheries.

147. Nonetheless, significant environmental stresses still remain. One of the major persistent environmental threats is from inappropriate sewage disposal and wastewater discharge, causing

¹⁵ From 2012 UNDP Guidance.

pollution in nearshore waters that can affect sensitive coastal and marine habitats, particularly corals. The sewerage system on Pulau Tioman remains inadequate. In Redang, a new wastewater treatment plant that was set up to service five coastal resorts has not yet been connected, due to lack of leadership and initiative within the community and lack of qualified operators. There has also been a failure to follow and monitor EIA guidelines for land-based activities. This includes both wastewater discharge and such activities as construction (e.g., construction of the Redang water treatment facility resulted in erosion and sediment discharge). Because the outstanding threats are still quite serious, the stress reduction parameter is rated as **Marginal (M)**.

Progress towards stress or status change

148. The prospects for effecting reductions in environmental stress or improved environmental status in the future are good. This is because through the project, underlying preconditions have been created that would favor such improvements. These include:

- greater conservation awareness and community engagement that help facilitate improved Marine Park management;
- the trends toward decreasing arrests of violations in the 2-nm prohibited fishing zone, due to project programs implemented with fishermen, and through stakeholder consultations;
- promotion of better enforcement, through the production of an enforcement manual and through training that has increased numbers and skill levels of enforcement officers;
- development of a coral reef bleaching response plan which can help to address future threats to coral ecosystems; and
- promotion of alternative livelihoods that will continue to alleviate pressures on marine biodiversity resources.

149. It is judged that these elements will make an important contribution toward reducing stresses and changing status in a positive way. For this reason, the TE team has assigned a rating of **Significant (S)** for this parameter.

IV. Conclusion

150. The project demonstrated significant success in completing its targeted outputs, thus leading to overall achievement of the desired outcomes. Among the most notable accomplishments of the project were the following:

- the establishment of the National Steering Committee and three State Steering Committees as effective mechanisms for vertical and horizontal institutional coordination;
- creation of a marine park management information system (MPMIS), to provide the capability of sharing data across multiple sectors;
- advocacy for passage into law of a Marine Parks Act;
- successful establishment of Community Coordinating Committees (CCCs) in all three sites, which served as conduits for information exchange between the communities, the DMPM, and the project;

- active support for the uptake of alternative livelihoods, including the formation of two community cooperatives and development of three community business plans, as well as completion of a variety of livelihood training courses;
- formulation of a comprehensive eco-certification scheme for tourism operators, which can be applied and implemented in the future;
- provision of training to Marine Park personnel to successfully strengthen enforcement capability, and engagement with the community to further support enforcement activities within the Marine Parks;
- the establishment of several watchdog groups (e.g., Reef Rangers, Rakan Park) to promote more effective management of marine protected areas; and
- achievement of raised awareness, among both community members and representatives of State governmental agencies, resulting in a higher level of commitment, sense of ownership, and responsibility as far as marine conservation is concerned.

151. In summary, Project achievements were numerous, especially in raising awareness, and provision of viable alternative livelihoods within coastal communities, which contributed to reducing stress on biodiversity resources. Effective transition of personnel staffing the project, into permanent agency positions, promotes sustainability. Enforcement was strengthened through training activities and community participation. Further work is needed in advocating for adoption of a Marine Parks Act, closer engagement with key agencies such as the Ministry of Tourism, and strengthening the technical scientific basis for marine park planning and decision-making.

152. The evaluation that has been presented in the foregoing sections shows that the project was quite ambitious in its scope. It faced many challenges, yet managed to handle most of them successfully. The results of the evaluation are summarized in the evaluation rating table presented in Table ES-2 in the Executive Summary. As shown in Table ES-2, for this Terminal Evaluation, the project is given an overall rating of **Satisfactory (S)**.

V. Lessons Learned

153. Extensive experience was gained, and numerous lessons were learned, about conservation of marine biodiversity resources and marine park management, through the implementation of this project. Among the most significant lessons were the following:

- (i) A sound technical understanding of biodiversity and ecosystems is the foundation that underpins effective protected area management. In the project, the absence of a qualified marine biologist on the consultant team caused lack of credibility in a number of key outputs (e.g., MPA management plans, and monitoring of biodiversity status).
- (ii) Separation of responsibility for terrestrial and marine management on small islands—a “silo effect”—makes finding workable solutions to common problems more difficult.
- (iii) A strong sense of community ownership, and recognition by communities that natural resources are their heritage (and realization that their livelihoods are closely tied to sustainable resource use) can contribute to a strong conservation ethic; even in systems that historically have applied a ‘top-down’ management approach (such as Malaysia’s), community-level support and cooperation are needed to curb adverse environmental impacts that could weaken conservation initiatives.

- (iv) Creation of viable alternative livelihood opportunities can benefit marine biodiversity conservation efforts by (1) directly moving residents in coastal communities away from destructive extractive fisheries practices, into more environment-friendly services industries (e.g., tourism), and (2) fostering greater community cooperation, understanding and participation in conservation efforts.
- (v) Complex project design, without clear indicators for measuring performance, makes project implementation and monitoring and evaluation more difficult.
- (vi) Effective marine conservation within protected areas requires detailed, site-specific studies of the living resources of the area, and tailoring of zonation plans to fit the specific needs for the location, backed up by appropriate legislation and regulations.
- (vii) Frequent changes in key personnel (whether in project staff, executing agency, or steering committees) makes project operations inefficient and can cause lack of continuity and considerable delays.
- (viii) In the absence of hard scientific data, local ecosystem knowledge (LEK) is an adaptive approach that can provide valuable information upon which preliminary planning can be based. However, the LEK information needs to be ground-truthed and validated for more critical management decision-making.
- (ix) Strong interagency cooperation can greatly enhance project efficiency and result in cost savings.
- (x) Strong leadership and sense of commitment among project staff can catalyze positive changes that extend beyond the scope of the project itself.
- (xi) Strong linkages between government, academia, NGOs, and communities can lead to more effective identification of key problems, and their subsequent solutions.
- (xii) Successful project actions can serve as models to be replicated or expanded by other stakeholders, at other sites, for broader beneficial purposes.
- (xiii) Improvements to physical infrastructure alone cannot solve environmental problems. In order to achieve the desired outcome, such improvements need to be supported with adequate community preparation, technical knowledge and financing for operation and maintenance.
- (xiv) Given the important role of the EPU in budget approval, it is critical that DMPM undertake purposeful coordination with the EPU; proposals need to be well thought-out and presented.
- (xv) The uniform application of a 2 nautical mile restricted no fishing zone is a 'one size fits all' approach that may not be workable in all situations. A more flexible and tailored zonation system within the marine parks may generate stronger community support, and ultimately lead to improved conservation results.
- (xvi) While typically GEF is highly engaged in evaluation and providing feedback during the project preparation and formulation stage (e.g., STAP review, CEO endorsement process, etc.), it seems to gravitate more towards a "laissez-faire" management style during project implementation. Greater involvement by GEF at critical points during implementation could help to avoid or minimize some of the design problems (e.g., complex project outcomes, poorly framed indicators) that affect projects.

- (xvii) Establishing a clear legal basis for tourism concerns to operate is of vital importance, and is intimately linked to the preservation of the environmental integrity of small island ecosystems, including preservation of marine biodiversity. Two of the important legal elements are: (i) implementing tenurial arrangements that would enable and encourage operators to make the long-term investments in infrastructure improvements (e.g., solid waste disposal and sewage treatment) that are needed to ensure that environmental quality is preserved; and (ii) making sure that all resort operators are in compliance with prevailing EIA requirements, and have thus been given legal clearance (in the form of a Certificate of Fitness) to operate.

154. Further information about the lessons learned is presented in Annex K. In this annex a table has been prepared that shows the specific cases or examples upon which each lesson has been derived, or upon which it is based.

VI. Recommendations

155. Closely associated with the large number of lessons learned, were an even greater number of key recommendations that emerged from this terminal evaluation of the project. A total of some 30 recommendations were gathered, and these are also enumerated in Annex K. These recommendations will be useful in formulating, monitoring and evaluating similar marine conservation and management projects in the future. Of the total recommendations offered in the TE report, the following are regarded to be the most critical for ensuring the sustainability of marine biodiversity resources and improved management of marine parks in Malaysia:

- (i) Continue to conduct advocacy for passage of a Marine Parks Act.
- (ii) Strengthen awareness-raising efforts during State and District Action Council monthly meetings. Such efforts should focus especially on raising the awareness of the importance of MPA management for the economic sustainability of small marine park islands.
- (iii) Because DMPM is still a new department, its staff still need to gain further training and experience. Therefore, enhance technical knowledge of DMPM staff at all levels, through training, academic coursework and mentorship. This should include capacity-building in basic marine biology and ecology, protected area management, environmental impact assessment, enforcement, and related disciplines.
- (iv) Employ qualified marine biologists, conservationists, and protected area management specialists to review the three MPA Management Plans that were prepared under the project, to ensure their technical acceptability. Through further community consultations, finalize the Management Plans and pursue their adoption to give a legal basis for enforcing them. The plans also need to be harmonized with the current legal restrictions on fishing activities within a 2-nautical mile limit in all Marine Parks. Once the acceptability of the plans has been demonstrated, replicate the plans for other MPs outside the project area of coverage.
- (v) To overcome divisions associated with sector-based management, identify and strengthen mechanisms to facilitate more effective coordination between agencies responsible for oversight of terrestrial (land-based) and marine-based activities (e.g., through the Cabinet Committee for National Physical Planning). Alternatively, explore the establishment of integrated State parks that include management of both terrestrial and marine components on small islands.

- (vi) Strengthen sustainable financing for marine park operations by (a) developing an action plan based on the DMPM business plan that is time bound with a prioritized road map; (b) exploring linkages with relevant GoM-UNDP initiatives such as project for Payment for Ecosystem Services (PES), Biodiversity Finance Assessment and international initiatives such as The Economics of Ecosystems and Biodiversity (TEEB) studies; (c) exploring the feasibility of additional mechanisms including global trends and practices such as voluntary tourist contribution systems, tourism tax on rooms, carefully designed and monitored volunteer tourism, etc.; (d) discussing the potential for benefit-sharing with local communities/local authorities (e.g. funds from voluntary contributions to be channeled to community development and capacity building); (e) considering development of a full cost assessment of financing needs that are linked to conservation objectives and strategies to fulfill the costs; and (f) engaging institutions such as GEF, WWF, etc. who have experience in conservation trust funds, to provide expert advice and support to strategize the future direction of the Marine Park Trust Fund.
- (vii) The steering committees established under the project proved to be effective vehicles for coordination across different sectors and at different institutional levels. Therefore, the National Steering Committee (NSC), State Steering Committees (SSCs), and Community Coordinating Committees (CCCs) should be maintained. The prevailing proposal is that the project SSCs will be converted to State Steering Committees for Marine Park Management. CCCs could continue to operate at the local level, while the NSC should be maintained at the national level. It is recommended that a roadmap for the continuation of these vital coordinating bodies be prepared.

Annexes

Annex A: Evaluation TORs

Annex B: References

Annex C: List of Persons Met/Interviewed

Annex D: Schedule of Meetings, Site Visits and Field Activities

Annex E: Evaluation Criteria Matrix

Annex F: Threats Analysis

Annex G: Changes to Logical Framework, Project Objective, and Indicators

Annex H: Matrix for Monitoring the Achievement of Project Outcomes

Annex I: Comments and Recommendations on Project Baselines and Indicators

Annex J: Composition of Project Steering Committees

Annex K: Lessons Learned and Recommendations

Annex L: Case Studies

Annex A: Evaluation TORs

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TERMS OF REFERENCE (TOR)
EVALUATION CONSULTANTS
(ONE (1) INTERNATIONAL CONSULTANT AND
ONE (1) NATIONAL CONSULTANT)

FOR THE TERMINAL EVALUATION OF THE GoM/UNDP-GEF PROJECT **"CONSERVING
MARINE BIODIVERSITY THROUGH ENHANCED MARINE PARK MANAGEMENT AND
INCLUSIVE SUSTAINABLE ISLAND DEVELOPMENT"**

PROJECT SUMMARY

Project Title:	Conserving Marine Biodiversity Through Enhanced Marine Park Management and Inclusive Sustainable Island Development
GEF Project ID:	PIMS:1040
UNDP Project ID:	00034097
Focal Area:	Biodiversity Conservation
GEF Strategic Priority:	SP 1: To catalyse sustainability of protected area (PA) systems SP 2: Mainstreaming biodiversity in production landscapes and sectors
Country:	Malaysia
Duration:	60 Months originally now extended to 75 months
GEF Agency:	UNDP
Executing Agency:	Ministry of Natural Resources and Environment (NRE)
Implementing Agencies:	Department of Marine Park Malaysia (DMPM)
Approval Date:	June 20th, 2006
Effective Date:	March 1 st , 2007
GEF Budget:	US\$ 1, 952,400.00
Primary Beneficiaries:	Marine Protected Area Managers (DMPM), local communities living within the marine park areas, relevant federal and state government agencies

1. INTRODUCTION

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Three groups of islands, namely Redang, Tioman and Sibu-Tinggi, have been chosen for piloting. These three sites comprise a total area of 164,534.2 ha which is 28.89% of the total area of 569,447.7 ha calculated for the 40 Marine Parks gazetted in Malaysia in 1994.

Surveys by Harborne et.al (2000) indicate that the three marine parks, which were chosen as project sites, constitute a globally important area for biodiversity, especially when considering the limited number of reef types (dominated by shallow fringing reefs). A total of 221 coral species have been identified in the project area including 67 species not previously (been) reported from Malaysia (Harborne, et. al., 2000). This figure represents about 80% of the number of species identified in an equivalent area in the 'Coral Triangle', which is known to have the greatest coral diversity on earth.

The fish fauna of the three project sites is also known to be globally important with at least 298 species identified. There is also evidence that, as with corals, Malaysia has 80% of the number of fish species of the 'Coral Triangle'. The waters of the three project sites also provide important habitat for four of the seven marine turtle species in the world: the Leatherback, the Green, the Hawksbill and the Olive Ridley. Redang is one of the major nesting areas for Green and Hawksbill turtles in Malaysia. Ten cetacean species have also been documented (Nadarajah, 2000) and resident populations of dugong have been confirmed in the Johor Marine Park (Hiew, pers.comm.).

The project responds to the need to address a number of Primary threats to marine biodiversity which are:

1. Declining fish stocks and exploitation of breeding grounds
2. Loss of habitat for marine life and destruction of coral reefs and
3. Habitat degradation and degradation of water quality

Malaysia as a signatory to International Convention on Biodiversity has to achieve the 2010 Targets of 1.1 and 1.2 which relate to improvements in protected area management. The project is executed by Ministry of Natural Resources and Environment and implemented by the Department of Marine Park Malaysia (DMPM).

The project's objective is to achieve enhanced Marine Park Management and Inclusive sustainable island development. In order to achieve this, the project comprises of 7 outcomes as follows:

Outcome 1: Adaptive Marine Park management by a mechanism of cross-sectoral information sharing and knowledge transfer into decision-making bodies.

Outcome 2: Mechanisms for effective multi-sectoral policy making, development planning and an improved financial sustainability.

Outcome 3: Involvement of local communities in Marine Park management and enabling them to benefits of biodiversity conservation by generating alternative livelihoods.

Outcome 4: Tourism operators integrated into Protected Area Management and reduction of the direct and indirect impacts of tourism activities on biodiversity.

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Outcome 5: MPUs follow international standards of protected area management and achieve efficient enforcement and prevention of violations.

Outcome 6: Raised awareness of the importance of biodiversity conservation and marine park system in Malaysia among selected target groups.

Outcome 7: Framework for strong advocacy from stakeholders for the conservation in the marine parks of Malaysia.

While the project's field activities are focused on the three project sites, outputs aim to have wider relevance through a series of dissemination and replication activities.

The Project Document and other relevant GEF documents can be downloaded from the following weblink: http://www.thegef.org/gef/project_detail?projID=1201

Information on the UNDP evaluation process and experience from other countries can be referred to the Evaluation Resource Center at the following weblink <http://erc.undp.org/index.html>

2. GEF OBJECTIVES AND PURPOSE OF TERMINAL EVALUATION

Monitoring and evaluation in the Global Environment Facility (GEF) projects have the following overarching objectives:

- To promote accountability for the achievement of GEF objectives through the assessment of results, effectiveness, processes, and performance of the partners involved in GEF activities. GEF results are monitored and evaluated for their contribution to global environmental benefits;
- To promote learning, feedback, and knowledge sharing on results and lessons learned among the GEF and its partners, as a basis for decision-making on policies, strategies, programme management, and projects, and to improve knowledge and performance.

The purposes of conducting evaluation includes the understanding of why and the extent to which intended and unintended results are achieved, and their impact on stakeholders. Evaluation is an important source of evidence of the achievement of results and institutional performance, and contributes to knowledge and to organisational learning. Evaluation should serve as an agent of change and play a critical role in supporting accountability.

In accordance, all full and medium-size projects supported by GEF are subject to a final evaluation upon completion of implementation. In addition to providing an independent in-depth review of implementation progress, this type of evaluation is responsive to GEF Councils' decisions on transparency and better access to information during implementation and on completion of a project.

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Specifically, the Terminal Evaluation (TE) must provide a comprehensive and systematic account of the performance of a completed project by assessing its project design, process of implementation and results vis-à-vis project objectives endorsed by the GEF including the agreed changes in the objectives during project implementation. TEs have four complementary purposes as follows:

- To promote accountability and transparency, and to assess and disclose levels of project accomplishments;
- To synthesize lessons that may help improve the selection, design and implementation of future GEF activities;
- To provide feedback on issues that are recurrent across the portfolio and need attention, and on improvements regarding previously identified issues; and,
- To contribute to the GEF Evaluation Office databases for aggregation, analysis and reporting on effectiveness of GEF operations in achieving global environmental benefits and on quality of monitoring and evaluation across the GEF system.

A mix of tools is used to ensure effective project M&E. These can be applied continuously throughout the lifetime of the project – e.g. periodic monitoring of indicators, or as specific time-bound exercises such as mid-term reviews, audit reports and independent evaluations.

3. OBJECTIVES OF THIS TERMINAL EVALUATION

This terminal evaluation (TE) is being carried out to provide a comprehensive and systematic account of the performance of the project by assessing its project design, the process of implementation, and results and outputs as they relate to project objectives endorsed by the GEF and other partners (UNDP, NRE, DMPM) including the agreed changes in the objectives during project implementation. Specifically, the Terminal Evaluation will undertake the following tasks:

- Assess overall performance and review progress towards attaining the project's objectives and results including relevancy, efficiency and effectiveness of the actions taken given the available funding and capacities for implementation;
- Review and evaluate the extent to which the project outputs and outcomes have been achieved and provide rating employing the six-point rating scale (HS to HU) (see Annex 2);
- Assess the project results and determine the extent to which the project objectives were achieved, or are expected to be achieved, and assess if the project has led to any positive or negative consequences and provide a rating of project objective achievement on the six-point rating scale;
- Assess the extent to which the project impacts have reached or have the potential to reach the intended beneficiaries;
- Critically analyse the implementation arrangements and identify strengths and weaknesses in the project design and implementation and provide a rating of the project implementation, employing the six-point rating scale;

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- Describe the project's adaptive management strategy – how have project activities changed in response to new conditions and have the changes been appropriate;
- Review the clarity of roles and responsibilities of the various agencies and institutions and the level of coordination between relevant players;
- Assess the level of stakeholder involvement in the project from community to higher Government levels and recommend on whether this involvement has been appropriate to the goals of the project;
- Describe and assess efforts of UNDP in support of implementation;
- Review donor partnership processes, and the contribution of co-finance;
- Describe key factors that will require attention in order to improve prospects for sustainability of project results achieved; and,
- Identify and document the main successes, challenges and lessons that have emerged.

4. SCOPE OF THE EVALUATION

Three main elements to be evaluated are Delivery, Implementation and Finances. Each component will be evaluated using three criteria: effectiveness, efficiency and timeliness.

Project Delivery: The TE will assess to what extent the project has achieved its immediate objectives. It will also identify what outputs, impacts and results have been produced and how they have enabled the project to achieve its objectives. The consultants are required to make assessment of the following issues under each priority area outlined below:

Institutional arrangement

- Preparatory work and implementation strategies
- Consultative processes
- Technical support
- Capacity building initiatives
- Project outputs
- Assumptions and risks
- Project related complementary activities

Outcome, results and impacts

- Efficiency of all project activities under the five major components
- Progress in the achievement of the immediate objectives (include level of indicator achievement when available)

Partnerships

- Assessment of national level involvement and perception
- Assessment of local partnerships, and involvement of stakeholders
- Assessment of collaboration between government, intergovernmental and non-governmental organisations

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Risk management

- Were problems/constraints, which impacted on successful delivery of the project identified at the project design stage and subsequently as part of the Mid Term Evaluation (MTE)?
- Were there new threats/risks to project success that emerged during project implementation?
- Were both kinds of risk appropriately dealt with?
- Were recommendations arising from the MTE addressed?

Monitoring and Evaluation

- Assess the extent, appropriateness and effectiveness of adaptive management at all levels of the project implementation
- Has there been a monitoring and evaluation framework for the project and how was this developed?
- Is the reporting framework effective/appropriate?
- Is this framework suitable for replication/continuation for any future project support?

Project Implementation: The TE will review the project management and implementation arrangements at all levels, in order to provide an opinion on its efficiency and cost effectiveness. This includes:

Processes and administration:

- Project related administration procedures
- Milestones (Log-frame matrix)
- Key decisions and outputs,
- Major project implementation documents prepared with an indication of how the documents and reports have been useful

Project oversight and active engagement by: UNDP and National steering committee

Project execution: Ministry of Natural Resources and Environment (NRE)

Project implementation: Department of Marine Park Malaysia (DMPM)

Project Finances: How well and cost effectively have financial arrangements of the project worked? This section will focus on the following three priority areas:

Project disbursements

- Provide an overview of actual spending against budget expectations
- Critically analyse disbursements to determine if funds have been applied effectively and efficiently.

Budget procedures

- Did the Project Document provide adequate guidance on how to allocate the budget?

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- Review of audits and any issues raised in audits and subsequent adjustments to accommodate audit recommendations;
- Review the changes to fund allocations as a result of budget revisions and provide an opinion on the appropriateness and relevancy of such revisions

Coordination mechanisms

- Evaluate appropriateness and efficiency of coordinating mechanisms between executing agencies and UNDP
- Does the approach represent an effective means of achieving the objectives?
- How can the approach be improved?

5. METHODOLOGY OF EVALUATION APPROACH

The evaluation will be conducted in a participatory manner through a combination of processes. It is anticipated that the methodology to be used for the TE will include the following:

Review of documentation including but not limited to:-

- Project Document and Project Appraisal Document;
- Project implementation reports (APR/PIR's);
- Quarterly progress reports and work plans of the various implementation task teams;
- Audit reports;
- Mid Term Evaluation report;
- Biodiversity Tracking Tools;
- M & E Operational Guidelines, all monitoring reports prepared by the project; and
- Financial and Administration guidelines.
- NIM/NGO Audit reports
- Other Malaysia's UNDP/GEF evaluation reports for biodiversity projects

The following documents will also be available:

- Project operational guidelines, manuals and systems;
- Minutes of the National Steering Committee, Technical Working Committee and other project management meetings;
- Maps;
- List of project publications;
- The GEF and UNDP Implementation Completion Report guidelines; and
- The UNDP Monitoring and Evaluation Frameworks.

Site visits and interviews in the field with stakeholders shall include:

- UNDP staff who have project responsibilities;
- Executing agencies (including but not limited to senior officials and task team/ component leaders: NRE, DMPM;
- The Chair of the National Steering Committee;
- Project stakeholders, to be determined at the inception meeting; and

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- Relevant staff of the Department of Marine Park Malaysia

The evaluation will start with an opening meeting with the Project Support Unit, executing agency and UNDP, and a review of the key project documentation including key reports and correspondence. It will include presentations from the various project components, visits to executing and implementing agency offices, interviews with key individuals both within the project, the government, and independent observers of the project and its activities, as well as project personnel. Field visits to project sites will be conducted to view activities first hand. There will be a closing meeting to discuss the findings of the evaluation prior to the submission of the draft final report.

6. EXPECTED OUTPUTS

The TE evaluators will be expected to produce:

a) An evaluation report, of approximately 30-40 pages, structured along the outline indicated in Annex 1.

- A detailed record of consultations with stakeholders will need to be kept and provided (as part of the information gathered by the evaluators), as an annex to the main report.
- If there are any significant discrepancies between the impressions and findings of the evaluation team and stakeholders, these should be explained in an annex attached to the final report.

b) A Power Point presentation (circa 15-20 slides) covering the key points of the TE.

c) A exit presentation to the executing agency, Project Support Unit and UNDP (precise date to be agreed as part of evaluators contract).

A draft of both a) and b) above should be submitted within two weeks of the end of the in-country component of the evaluators' mission, and a final copy within two weeks after receiving written comments on the drafts.

The draft and final versions of the products should be submitted to the Project Support Unit, who will be responsible for circulating it to key stakeholders.

7. DURATION

The evaluation is proposed to take place from 8th April to 19th April 2013. The expected number of working days per consultant is 20 days including 10 working days mission to Malaysia for the international consultant.

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8. DELIVERABLES AND TIMELINE

The TE Team will consist of one International Consultant and one National Consultant. The International Consultant will be the Team Leader. The Team Leader, in close collaboration with the National Consultant, will have the overall responsibility for the quality and timely submission of the deliverables. Specifically, the team of consultants is responsible for submitting the following deliverables to the UNDP Country Office and Project Support Unit:

Deliverables	Timeline
Draft detailed workplan reflecting the work of the international and national consultants	To be submitted within 5 days of the signing of the contracts
Draft Evaluation Report	To be submitted within 14 days after the completion of the mission in Malaysia
Final Evaluation Report	To be submitted within 14 days after reception of the draft final report with comments

9. QUALIFICATION AND EXPERTISE REQUIRED OF THE EVALUATION CONSULTANTS

The consultants will be responsible for the delivery, content, technical quality and accuracy of the evaluation, as well as the recommendations. He/she must not have previous involvement with any of the project activities except evaluation exercise.

The team should ideally have the following competencies and attributes:

- Competencies :
 - Results orientated and accountability
 - Capacity in planning and organizing
 - Communication and trust
 - Client orientation
 - Organizational development and innovation
- Have tertiary education in environmental economics, marine protected areas, natural resource management, biodiversity management or ecology. Post-graduate or with relevant professional qualification is preferred;
- More than 10 years of working experience in the environment and marine protected area management and with a good knowledge of the state-of-the-art approaches and international best practices;
- Prior knowledge of GEF and UNDP reporting frameworks, GEF principles and expected impacts in terms of global benefits, and the policy, legal and institutional environment of Malaysia would be an advantage;
- Demonstrated experience in donor-funded project evaluation, specifically undertaking complex programmatic reviews;

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- Familiar with project management and financial framework including output/outcome and impact analysis;
- Excellent English writing and communication skills. Demonstrated ability to assess complex situations in order to succinctly and clearly distil critical issues and draw forward looking conclusions;
- Ability to assess complex situations in order to succinctly and clearly distil critical issues and draw forward looking conclusions; and,
- The International Consultant is expected to lead to evaluation mission.
- The Local consultant is expected to be well versed with both English and Bahasa Malaysia and able to facilitate discussions among the local stakeholders.
- Excellent facilitation skills.

10. TERMS OF PAYMENT

20% upon submission of the draft detailed workplan

40% upon submission of the draft evaluation report

40% upon satisfactory completion of the final evaluation report

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ANNEX 1 REPORT SAMPLE OUTLINE

Terminal Evaluation Report – Sample outline

1. Executive summary

- Brief description of project;
- Context and purpose of the evaluation;
- Main conclusions, recommendations and lessons learned;

2. Introduction

- Purpose of the evaluation;
- Key issues addressed;
- Methodology of the evaluation;
- Structure of the evaluation.

3. The project(s) and its development context

- Project start and its duration;
- Problems that the project seek to address;
- Immediate and development objectives of the project;
- Main stakeholders;
- Results expected.

4. Findings and Conclusions

4.1 Project Formulation

- ✓ Implementation
- ✓ Stakeholder participation
- ✓ Replication approach
- ✓ Cost effectiveness
- ✓ Linkage of the project and other interventions within the sector
- ✓ Indicators

4.2. Project Implementation

- ✓ Delivery
- ✓ Financial management
- ✓ Monitoring and evaluation
- ✓ Execution and implementation modalities
- ✓ Management by UNDP, World Bank and other partners
- ✓ Coordination and operational issues

4.3 Results to date

- ✓ Attainment of Objectives
- ✓ Sustainability
- ✓ Contribution to upgrading skills at National level

5.0 Lessons learned

6.0 Conclusions and recommendations, including overall rating of project implementation and the achievement of project outcomes and objective.

7.0 Evaluation report Annexes

- Evaluation TORs , Itinerary and list of persons interviewed
- Summary of field visits, including evaluators findings, issues raised and recommendations by different stakeholders

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- List of documents reviewed
- Questionnaire used and summary of results if any
- Comments by stakeholders (only in case of discrepancies with evaluation findings and conclusions)

ANNEX 2 EXPLANATION ON TERMINOLOGY PROVIDED IN THE GEF GUIDELINES TO TERMINAL EVALUATIONS

Implementation Approach includes an analysis of the project's logical framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management.

Some elements of an effective implementation approach may include:

- The logical framework used during implementation as a management and M&E tool
- Effective partnerships arrangements established for implementation of the project with relevant stakeholders involved in the country/region
- Lessons from other relevant projects (e.g., same focal area) incorporated into project implementation
- Feedback from M&E activities used for adaptive management.

Country Ownership/Drivenness is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements where applicable. Project Concept has its origin within the national sectoral and development plans

Some elements of effective country ownership/drivenness may include:

- Project Concept has its origin within the national sectoral and development plans
- Outcomes (or potential outcomes) from the project have been incorporated into the national sectoral and development plans
- Relevant country representatives (e.g., governmental official, civil society, etc.) are actively involved in project identification, planning and/or implementation
- The recipient government has maintained financial commitment to the project
- The government has approved policies and/or modified regulatory frameworks in line with the project's objectives

For projects whose main focus and actors are in the private-sector rather than public-sector (e.g., IFC projects), elements of effective country ownership/drivenness that demonstrate the interest and commitment of the local private sector to the project may include:

- The number of companies that participated in the project by: receiving technical assistance, applying for financing, attending dissemination events, adopting environmental standards promoted by the project, etc.
- Amount contributed by participating companies to achieve the environmental benefits promoted by the project, including: equity invested, guarantees provided, co-funding of project activities, in-kind contributions, etc.

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- Project's collaboration with industry associations

Stakeholder Participation/Public Involvement consists of three related, and often overlapping processes: information dissemination, consultation, and "stakeholder" participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF-financed project. The term also applies to those potentially adversely affected by a project.

Examples of effective public involvement include:

Information dissemination

- Implementation of appropriate outreach/public awareness campaigns

Consultation and stakeholder participation

- Consulting and making use of the skills, experiences and knowledge of NGOs, community and local groups, the private and public sectors, and academic institutions in the design, implementation, and evaluation of project activities

Stakeholder participation

- Project institutional networks well placed within the overall national or community organizational structures, for example, by building on the local decision making structures, incorporating local knowledge, and devolving project management responsibilities to the local organizations or communities as the project approaches closure
- Building partnerships among different project stakeholders
- Fulfillment of commitments to local stakeholders and stakeholders considered to be adequately involved.

Sustainability measures the extent to which benefits continue, within or outside the project domain, from a particular project or program after GEF assistance/external assistance has come to an end. Relevant factors to improve the sustainability of project outcomes include:

- Development and implementation of a sustainability strategy.
- Establishment of the financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (from the public and private sectors, income generating activities, and market transformations to promote the project's objectives).
- Development of suitable organizational arrangements by public and/or private sector.
- Development of policy and regulatory frameworks that further the project objectives.
- Incorporation of environmental and ecological factors affecting future flow of benefits.
- Development of appropriate institutional capacity (systems, structures, staff, expertise, etc.).
- Identification and involvement of champions (i.e. individuals in government and civil society who can promote sustainability of project outcomes).

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- Achieving social sustainability, for example, by mainstreaming project activities into the economy or community production activities.
- Achieving stakeholders consensus regarding courses of action on project activities.

Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). Examples of replication approaches include:

- Knowledge transfer (i.e., dissemination of lessons through project result documents, training workshops, information exchange, a national and regional forum, etc).
- Expansion of demonstration projects.
- Capacity building and training of individuals, and institutions to expand the project's achievements in the country or other regions.
- Use of project-trained individuals, institutions or companies to replicate the project's outcomes in other regions.

Financial Planning includes actual project cost by activity, financial management (including disbursement issues), and co-financing. If a financial audit has been conducted the major findings should be presented in the TE.

Effective financial plans include:

- Identification of potential sources of co-financing as well as leveraged and associated financing¹.
- Strong financial controls, including reporting, and planning that allow the project management to make informed decisions regarding the budget at any time, allows for a proper and timely flow of funds, and for the payment of satisfactory project deliverables
- Due diligence due diligence in the management of funds and financial audits.

Co-financing includes: Grants, Loans/Concessional (compared to market rate), Credits, Equity investments, In-kind support, Other contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries. Please refer to Council documents on co-financing for definitions, such as GEF/C.20/6.

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

¹ Please refer to Council documents on co-financing for definitions, such as GEF/C.20/6. The following page presents a table to be used for reporting co-financing.

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Cost-effectiveness assesses the achievement of the environmental and developmental objectives as well as the project's outputs in relation to the inputs, costs, and implementing time. It also examines the project's compliance with the application of the incremental cost concept. Cost-effective factors include:

- Compliance with the incremental cost criteria (e.g. GEF funds are used to finance a component of a project that would not have taken place without GEF funding,) and securing co-funding and associated funding.
- The project completed the planned activities and met or exceeded the expected outcomes in terms of achievement of Global Environmental and Development Objectives according to schedule, and as cost-effectively as initially planned.
- The project used either a benchmark approach or a comparison approach (did not exceed the costs levels of similar projects in similar contexts)

Efficiency: Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was then did that affect cost-effectiveness? Wherever possible the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

The evaluation of relevancy, effectiveness and efficiency will be as objective as possible and will include sufficient and convincing empirical evidence. Ideally the project monitoring system should deliver quantifiable information that can lead to a robust assessment of project's effectiveness and efficiency. Since projects have different objectives assessed results are not comparable and cannot be aggregated. To track the health of the portfolio project outcomes will be rated as follows:

Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Highly Unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Relevance and effectiveness will be considered as critical criteria. The overall outcome rating of the project may not be higher than the lowest rating on either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.

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The evaluators will also assess positive and negative actual (or anticipated) impacts or emerging long term effects of a project. Given the long term nature of impacts, it might not be possible for the evaluators to identify or fully assess impacts. Evaluators will nonetheless indicate the steps taken to assess project impacts, especially impacts on local populations², local environment (e.g. increase in the number of individuals of an endangered species, improved water quality, increase in fish stocks, reduced greenhouse gas emissions) and wherever possible indicate how the findings on impacts will be reported to the GEF in future.

Assessment of Sustainability of project outcomes

The GEF Monitoring and Evaluation Policy, 2006, specifies that a TE will assess at the minimum the "likelihood of sustainability"³ of outcomes at project termination, and provide a rating for this." The sustainability assessment will give special attention to analysis of the risks that are likely to affect the persistence of project outcomes. The sustainability assessment should also explain how other important contextual factors that are not outcomes of the project will affect sustainability. Following four dimensions or aspects of sustainability will be addressed:

- Financial resources: Are there any financial risks involved in sustaining the project outcomes? What is the likelihood that financial and economic resources will not be available once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes)?
- Sociopolitical: Are there any social or political risks that can undermine the longevity of project outcomes? What is the risk that the level of stakeholder ownership will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- Institutional framework and governance: Do the legal frameworks, policies and governance structures and processes pose any threat to the continuation of project benefits? While assessing on this parameter also consider if the required systems for accountability and transparency, and the required technical know-how is in place.
- Environmental: Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes. For example, construction of dam in a protected area could inundate a sizable area and thereby neutralizing the biodiversity related gains made by the project.

² Impacts are positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. *Glossary of key terms in evaluation and results based management*. OECD, Development Assistance Committee. For the GEF, environmental impacts are the main focus.

³ Sustainability will be understood as the likelihood of continued benefits after the GEF project ends.

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On each of the dimensions of sustainability of the project outcomes will be rated as follows:

Likely (L): There are no risks affecting this dimension of sustainability.

Moderately Likely (ML): There are moderate risks that affect this dimension of sustainability.

Moderately Unlikely (MU): There are significant risks that affect this dimension of sustainability

Unlikely (U): There are severe risks that affect this dimension of sustainability.

All the risk dimensions of sustainability are critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an Unlikely rating in either of the dimensions then its overall rating cannot be higher than Unlikely, regardless of whether higher ratings in other dimensions of sustainability produce a higher average.

Project monitoring and evaluation system will be rated as follows on each of the dimensions:

Highly Satisfactory (HS): There were no shortcomings in the project M&E system.

Satisfactory(S): There were minor shortcomings in the project M&E system.

Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system

Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system

Unsatisfactory (U): There were major shortcomings in the project M&E system

Highly Unsatisfactory (HU): The Project had no M&E system

"M&E plan implementation" will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on "M&E plan implementation".

Annex B: References

This listing is not exhaustive, but includes the key project reports, documents, and guidelines that were reviewed and utilized for the evaluation. The TE consultants also reviewed a wide range of the other numerous documents provided by DMPM and UNDP, as required. Web links to key documents are also included where available.

1. Project Reporting Documents, Guidelines etc.

AFP, 18 May 2011. Malaysia unveils plan to build 'green economy.' Accessible at: <http://www.google.com/hostednews/afp/article/ALeqM5hTnDq6M6NKZXYIZHhPsVpwbiEvUw?dclid=CNG.cc6136f64ecf4182964a463c1446cddf.791/>

Global Environment Facility (GEF). November 7, 2006. GEF Council December 5-8, 2006. Agenda Item 17. Roles And Comparative Advantages of the GEF Agencies. GEF/C.30/9.

GoM (2011). Tenth Malaysia Plan 2011-2015. Economic Planning Unit, Economic Planning Unit, Prime Minister's Department, Malaysia. Accessible at: http://www.undp.org.my/files/editor_files/files/reports%20and%20publications/RMK10_Eds.pdf

GoM, UNDP, GEF (2006). Project Document. Conserving Marine Biodiversity through Enhanced Marine Park Management and Inclusive Sustainable Island Development. GoM, UNDP, GEF, Kuala Lumpur Malaysia.

GoM, UNDP, GEF (2007). Inception Report. Main Pp.123, Annexes 6, Pp. 245. Conserving Marine Biodiversity Through Enhanced Marine Park Management and Inclusive Sustainable Island Development. Project ID 00034097. PM-PTR-IR-FI-281207-V1.0. GoM/UNDP/ GEF, Kuala Lumpur, Malaysia.

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Ministry of Science, Technology and Environment Malaysia (2002). National Policy on Environment, Malaysia. Accessible at: http://www.doe.gov.my/portal/wp-content/uploads/2010/07/dasar_alam_sekitar_negara.pdf

Performance Management Unit (PEMANDU) (2010). ETP Handbook, Chapter 10, Tourism. Accessible at: http://etp.pemandu.gov.my/upload/etp_handbook_chapter_10_tourism.pdf

PMU (2012). Annual Project Implementation Review Report. Conserving Marine Biodiversity through Enhanced Marine Park Management and Inclusive Sustainable Island Development. Project ID 00034097.

PMU (2011). Annual Project Implementation Review Report. Conserving Marine Biodiversity through Enhanced Marine Park Management and Inclusive Sustainable Island Development. Project ID 00034097.

UNDP. 2012. *Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*. UNDP Evaluation Office, New York, USA. Accessible at: <http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf>

2. Project Publications

- A) Planning:
 - i) MPMIS system and manuals
 - ii) Three Draft Management Plans
 - iii) Coral Bleaching Response Plan
 - B) Policy
 - i) Policy booklet
 - ii) Draft DMPM Business Plan
 - C) Community
 - i) 3 CCC guidelines & resource booklets
 - ii) 3 Community co-operative proposal guides
 - iii) Alternative livelihood training provider brochures
 - D) Tourism
 - i) Environmental Best Practices Booklet
 - E) Enforcement
 - i) Enforcement Manual
 - F) Awareness
 - i) Communication Plan
-

Annex C: List of Persons Met/Interviewed

No.	Name	Position and Institution
	Department of Marine Park, Malaysia	
1	Dr. Sukarno Wagiman	Director General
2	En. Kamaruddin Ibrahim	Deputy Director General
3	En. Ab. Rahim B. Gor Yaman	Director, Planning and Management Division
4	Datin Hj. Shahima Binti Abdul Hamid	Director, Research and Resource Inventory Division
5	Ms. Halijah Binti Mat SIn	Director, Education and Information Interpretation Division
6	En. Wan Muhammad Aznan	Director, Enforcement and Licensing Division
7	En. Abd. Muntalib B. Juli	Fisheries Officer
8	Ms. Lim Ai Gaik	Marine Parks Officer
9	Ms. Izarenah Md Repin	Marine Parks Officer
10	Ms. Maznah Bt Yusoff	Marine Parks Officer
11	Ms. Normah Binti Said	Marine Parks Officer
12	En. Albert Apollo Chan	Marine Parks Officer
13	En. Anuar Deraman	Marine Parks Officer
14	Ms. Rohaida binti Omar	Marine Parks Officer
15	Ms. Siti Khairiah Binti Mohd Ruslan	Marine Parks Officer
16	En. Razlan Nuzol Azam	Marine Parks Officer
17	En. Wan Azli b. Wan Yusoff	Head of Marine Park Center
18	Ms. Bahrinah Bt Bahrim	Marine Parks Officer
19	Mohd Redhvan Bin Arif	Marine Parks Officer
20	En. Che Mohd Khir Bin Omar	Fisheries Assistant
21	Ms. Nurashiqin Binti Sallih Udin	Marine Parks Officer
22	En. Mohd. Asri Bin Awalluddin	Fisheries Assistant Officer
23	En. Ahmad Ulum B. Kamarudin	Marine Park Assistant
24	En. Muhammad Azhar Bin Zakariya	Fisheries Assistant
25	En. Mohd Aizam Bin Patini	Marine Assistant
26	En. Ali Hasim Mohd Fharif	Marine Assistant
27	En. Mohd Redualy Bin Mohd Ali	Marine Assistant
28	En. Mohd Lotfi Bin Ali	Marine Assistant
29	En. Zulkifly Mohd. Supri	Fisheries Assistant
30	En. Jaini Bin Jailan	Fisheries Assistant
31	En. Saeck Bin Nasser	Fisheries Assistant
32	En. Anuar B. Safia	Fisheries Assistant
	UNDP	
33	Mr. Asfaazam Kasbani	Assistant Resident Representative (Programme) Energy and Environment, UNDP Malaysia
34	Mr. Hari Ramalu	Programme Manager, UNDP Malaysia

No.	Name	Position and Institution
	National Steering Committee level	
35	Ms. Norhaslin Abd. Halim	Principal Assistant Secretary, Environmental Management and Climate Change Department, NRE
36	Captain (M) Robert Teh Geok Chuan	Principal Asst. Director, Malaysian Maritime Enforcement Agency
37	Mr. Julian Hyde	General Manager, Reef Check Malaysia
38	Ms. Adzlina Ibrahim	Principal Assistant Secretary, Biodiversity Management and Forestry, NRE
39	Mr. Ahmad Rizal Khalit	Principal Assistant Director, Environment and Natural Resource Economic Section (SEASSA), Economic Planning Unit, Prime Minister's Department
40	Prof Dr. Nor Aeni Haji Mokhtar	Under-Secretary, National Oceanographic Directorate
41	Ms. Nadiyah Fatin Ikhsan	Science Officer, National Oceanographic Directorate
42	En. Muhammad Yazid Omar	Deputy Director, National Solid Waste Management Department
43	Ms. Norfarhana Bt. Zainol Shokor	Principal Assistant Secretary, Ministry of Tourism
44	Ms. Zamzurina Zulkifli	Assistant Secretary, Biodiversity Management and Forestry, NRE
45	En. Muhamad Azizi Mustapa	Wildlife Officer, Department of Wildlife and National Parks
46	Ms. Rohani Jusoh	Department of Environment
	State Steering Committee level	
	Terengganu	
47	Mr. Yap Chuan Bin	Manager, Eco-tour operator
48	En. Mohd Saiful Azzam B. Rosli	Deputy Director, Town and Country Planning, Terengganu
49	En. Mohd Nasruddin Tirmidzi B. Mohamad	State Secretary's Office (Local Government)
50	Dr. Hjh. Zainab Bt Zubir	Principal Assistant Director (Evaluation and Development) , DOE Terengganu
51	Ms. Nadiyah binti Abdul Kadir	Assistant Director, Department of Irrigation and Drainage, Terengganu
52	Ms. Zuraida Bt Zakaria	Assistant Director, Department of Forestry, Terengganu
53	En. Abdul Khalil	Director, Department of Fisheries Terengganu
	Pahang	
54	Ms. Norarziah bt. Abdullah@ Aziz	Fisheries Officer, DOF Pahang
55	En. Rozali b. Abdul Rawi	Assistant Director, Education Department, Pahang
56	En. Mohd. Shukri b. Mohd,	Assistant Director, Department of Forestry, Pahang
57	En. Ahmad Faudzi Abd Maji	Manager, Tioman Development Authority
58	En. Mohammad B. Abdullah	Assistant District Officer, Rompin District Office

No.	Name	Position and Institution
59	En. Md. Khairudin Bin Hasim	Operations Officer, MMEA, Kuantan
60	En. Rosni Binti Che Man	Maritime Officer, Maritime Department Malaysia (East)
61	Ms. Zailan bin hamzah	Technician, DID
62	En. Mohd Rosdi Abd Halim	Principal Assistant, Pahang State Secretary Office
	Johor	
63	Ms. You Hydell B. Abdul Ranman	District Engineer, DID
64	Ms. Siti Hawa Bt. Yatim	Director, DWNP, Johor
65	Ms. Lily Azzura Bt. Hangsor	Deputy Director, JPBD
66	Ms. Intan Farha Hanina Binti Ahmad	UPEN, Johor
67	En. Mohamad Khusyairi Ariffen	Assistant Director, Mersing Municipal Council
68	En. Mohd Fauzi Mohamad	Assistant Director, Mersing Land Office
69	Ms. Lili Bt. Touiman	Research Officer, JNPC
70	Lt. Kdr. Yusoff Abu Bahar	Assistant Director, MMEA, Johor
71	Mohd Zikri Omar	Research Officer, J-Biotech
72	Faridah Mohd Saman	Assistant Research Officer, J-Biotech
73	Ihsan Sabri b. Kamarazaman	District Forestry Officer, Department of Forestry, Johor
	Meeting with UPUM Consultants	
74	Dr. Ismail Othman	Director, UPUM
75	Dr. M. Nazani Jaafar	Project Manager, UPUM
76	Capt Wan Abdul Fatah	Consultant, UPUM
77	Dr. Tan Wan Hin	Consultant, UPUM
78	Ms. Maznolita Hamdah	UPUM
79	Ms. Nurunajmi Ibrahim	Officer, UPUM
80	Ms. Siow Soo Fei	Projec Assistant, UPUM
81	Dr. Siti Rohani Yahya	Consultant, UPUM
	Community Stakeholders	
82	En. Ab. Razib B. Ali Awang	Member of Tioman Island Community
83	En. Boharuddin bin Wan Chik	Member of Tioman Island Community
84	En. Wan Nor Aisafiq B. Wan Endut	Member of Tioman Island Community
85	Ms. Khadijah Binti Hassan	Member of Tioman Island Community
86	En. Syamsudinias Bt Mohd Anuar	Member of Tioman Island Community
87	En. Mohd. Akhir B. Abd. Ghani	Member of Tioman Island Community
88	Ms. Remelah Bt. Omar	Member of Redang Island Community
89	Ms. Siti Zubaidah Bt. Khalid	Member of Redang Island Community
90	En. Azmi Bin Kamaruzaman	Member of Redang Island Community
91	En. Mohd Zainal Bin Mohd Lazim	Member of Redang Island Community
92	En. Muhamad Zaidi B. Motto Lazim	Member of Redang Island Community
93	En. Lengah Bin Ibrahim	Member of Redang Island Community

No.	Name	Position and Institution
94	En. Lazim B. Jusuh	Member of Redang Island Community
95	En. Ladin Bin Awang	Member of Redang Island Community
96	En. Muhammad Othman	Member of Redang Island Community
97	En. Mohd Nasri Yasin	Member of Redang Island Community
98	Ms. Azlina Anuar	Member of Redang Island Community
99	En. Yusupriand Yusoff	Member of Redang Island Community
100	Ms. Julaila Wal	Member of Redang Island Community
101	En. Rahaman Bin Ali	Member of Tinggi Island Community
102	En. Kamarol Bin Mazlan	Member of Sibu Island Community

Annex D: Schedule of Meetings, Site Visits and Field Activities

Date	Place	No.	Time	Activities
9 May, Thursday	DMPM Putrajaya	1	am:	Meeting with UNDP Senior Programme Manager
		2		Meeting with Project Team and presentation by project
		3	pm:	Meeting with Senior DMPM Directors
10 May, Friday	DMPM Putrajaya	4	am:	Meeting with National Steering Committee
		5	pm:	Meeting with National Project Director
	Travel: Flight from KL to Kuala Terengganu			
11 May, Saturday	Travel: Boat from Kuala Terengganu to Redang Island			
	Community Centre	6	am:	Meeting with the Redang Community Consultative Committee and members
	Marine Park Centre	7	pm:	Site visit and diving at Redang
		8		Meeting with DMPM HQ and Terengganu Officers
	Travel: Boat from Pulau Redang to Kuala Terengganu			
12 May, Sunday	Kuala Terengganu	9	am:	Meeting with Terengganu Stakeholders (SSC)
	Travel: Kuala Terengganu to Kuantan			
13 May, Monday	Kuantan	10	am:	Meeting with Pahang Stakeholders (SSC)
		11	pm:	Discussion with DMPM Pahang Officers
	Travel: Kuantan to Mersing			
14 May, Tuesday	Mersing	12	am:	Meeting with Johor Stakeholders (SSC)
	Travel: Ferry from Mersing to Tioman			
15 May, Wednesday	Tioman Island and Marine Park Centre	13	am:	Site visit and diving at Pulau Tioman
		14		Discussion with project officers
		15	pm:	Site visits around Tioman
		16		Meeting with Pahang Community Consultative Committee and members
16 May, Thursday	Tioman Marine Park Centre	17	am:	Meeting with National Project Director and DMPM officer
		Travel: Tioman to KL		
17 May, Friday	DMPM Putrajaya	18	am:	Meeting with University Malaysia consultants
	UNDP office, KL	19	pm:	Meeting with UNDP Senior Programme Manager
		20		Courtesy meeting with UNDP Resident Representative
19 May, Sunday	Kuala Lumpur	21	am:	TE Consultant meeting
		22	pm:	Meeting with Reef Check Malaysia General Malaysia

Date	Place	No.	Time	Activities
20 May, Monday	DMPM Putrajaya	23	am:	TE team presentation of preliminary findings and wrap up
		24		Meeting with Deputy Under Secretary, Biodiversity and Forestry Management Division of NRE
		25	pm:	Meeting with former Project Manager via Skype
		26		Meeting with UNDP-GEF Regional Technical Advisor via Skype
		27		Courtesy meeting with the GEF focal point representative of Malaysia

Annex E: Evaluation Criteria Matrix

Evaluation Criteria	Questions	Sources	Key Findings
<i>Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?</i>	Since the start of the project, have there been any significant changes in the quality of key marine habitats, such as coral reefs, and in marine biodiversity?	<ul style="list-style-type: none"> • ReefCheck resiliency surveys compared against baseline surveys/PDF-B data • Stakeholder interviews 	<ul style="list-style-type: none"> • Increase in coral cover from 35.1% (2003) to 46.3% (2012) • Coral cover 10% higher than regional average • anecdotal reports of improvements in coral cover and fish abundance following implementation of protection, conservation and environmental measures • coral reef bleaching response plan prepared to address future threats to coral ecosystems
	<p>Have direct disturbances to marine habitats, or biodiversity, e.g., coral extraction, illegal fishing been reduced over the last 3-5 years?</p> <p><i>(Has the project contributed to the reduction of the threats of (i) declining fish stocks and exploitation of breeding grounds, and (ii) Loss of habitat for marine life and destruction of coral reefs?)</i></p>	<ul style="list-style-type: none"> • Violation reports • Project documents • Stakeholder interviews 	<ul style="list-style-type: none"> • Trends of arrests reported to be decreasing, due to project programs implemented with fishermen, and through stakeholder consultations • Enforcement manual produced • capacities for enforcement increased-156 staff manning patrol boats, and trained and given authority to make arrests • incentives and disincentives being applied • despite improvements overall, small-scale violations of fisheries restrictions (within 2 nm no-fish zone) continue

Evaluation Criteria	Questions	Sources	Key Findings
	<p>Have damaging effects of land-based activities (e.g., solid waste, sewage) been reduced over the last 3-5 years?</p> <p><i>(Has the project contributed to the reduction of the threat of habitat degradation and degradation of water quality?)</i></p>	<ul style="list-style-type: none">• Incident reports• Water quality monitoring results• Stakeholder interviews	<ul style="list-style-type: none">• inadequacy of sewerage system on Tioman remains a threat; topography prevents setup of centralized system for sewage treatment• in Redang STP was set up to service 5 resorts but not operational due to lack of leadership/initiative• there has been a failure to follow and monitor EIA guidelines for land based activities (e.g., construction of Redang water treatment facility resulted in erosion and sediment discharge)• water quality monitoring program initiated to complement DOE marine water quality monitoring—sites were selected to provide a better picture of potential impacts (i.e., using sampling points closer to areas of human use and ecological sensitivity)• solid waste (carried from remote locations) continues to litter beaches despite clean-up efforts

Evaluation Criteria	Questions	Sources	Key Findings
	Have livelihood activities in and around marine parks become more environment-friendly?	<ul style="list-style-type: none"> • Project activity reports • Stakeholder interviews 	<ul style="list-style-type: none"> • Extensive training conducted for a variety of alternative livelihoods • Cooperatives established and operational at 2 of the 3 project sites (Sibu-Tinggi did not express interest) • DMPM has allocated significant financing to support alternative livelihood • Presence of the marine park has stimulated increased tourism activity • Residents report increased income through tourism
Relevance: How does the project relate to the main objectives of the GEF focal areas, and to the environment and development priorities at the local, regional	How would you rate the relevance of the MPA project in terms of:		

Evaluation Criteria	Questions	Sources	Key Findings
<i>at the local, regional and national levels?</i>	a. supporting the objectives of the Convention on Biological Diversity (CBD) and UNDP programmatic objectives?	<ul style="list-style-type: none">• Malaysia GEF focal point• DMPM personnel• UNDP officers• researchers	<ul style="list-style-type: none">• marine park project sites are important stores of marine biodiversity, including highly diverse coral reef ecosystems, mangrove forests and seagrass beds, variety of fish species, and several rare and endangered species (sea turtles, dugongs)• project objectives consistent with 1998 Malaysia Biodiversity Policy (part of GEF enabling framework), and will help to strengthen the policy update, especially in the area of marine conservation• Highly consistent with and supportive of UNDP's global role to promote capacity-building and provide technical assistance, foster non-governmental and community participation, and promote national sustainable development

Evaluation Criteria	Questions	Sources	Key Findings
	b. supporting the national priorities for biodiversity conservation, and consistent with national development plans?	<ul style="list-style-type: none">• DMPM personnel• Malaysia Plan documents• 2nd National Malaysia Physical Plan• 1998 Malaysia Biodiversity Policy• national environmental laws and policies	<ul style="list-style-type: none">• The project developed management plans for 3 MPAs that contributed to the following target of the 10th MP: <i>'The Marine Park Management Plan for Peninsular Malaysia and existing legislation will be reviewed to further enhance the management of marine biodiversity'</i> (pg. 330). The project also contributed to the review of legislation but due to external factors, a Marine Park Act has not yet been passed into law.• The project contributed a chapter as an addendum to the National Physical Planning which stemmed from discussions at the NSC. (highest physical planning committee)• While DMPM has been established within NRE, mandate for its responsibilities is still under the Fisheries legislation; Marine Parks Act drafted and being considered

Evaluation Criteria	Questions	Sources	Key Findings
	c. addressing the needs of the local community, both in terms of environmental protection and improving the socio economic condition of the people?	<ul style="list-style-type: none"> • DMPM personnel • Community stakeholders 	<ul style="list-style-type: none"> • Project has raised community awareness of importance of marine biodiversity; incorporating strong conservation ethic within tourism practices • Communities have expressed that they consider the marine resources as their 'heritage' and are more committed to protect them, especially because they are the source of their livelihood • DMPM has allocated significant financing to support alternative livelihood • Presence of the marine park has stimulated increased tourism activity • Residents report increased income through tourism • Project carried out extensive livelihood training • Greater acceptance of DMPM and marine park within the local community, as a result of linkage with livelihood benefits
<i>Effectiveness: To what extent have/will the expected outcomes and objectives of the project been/be achieved?</i>	Was the MPA project effective in achieving its expected objective of enhanced marine park management and inclusive sustainable island development?	<ul style="list-style-type: none"> • DMPM personnel • Community stakeholders 	<ul style="list-style-type: none"> • Project achieved improved management of marine parks, especially in terms of improved enforcement capabilities • increased community awareness reflected greater inclusiveness • however, community not sufficiently engaged in management planning process

Evaluation Criteria	Questions	Sources	Key Findings
	Was the MPA project effective in achieving its expected outcome of:		
	(1) Adaptive marine park management by a mechanism of cross-sectoral information sharing and knowledge transfer into decision-making bodies;	<ul style="list-style-type: none"> • DMPM personnel • consultants 	<ul style="list-style-type: none"> • MPMIS established, with capability of sharing data across all sectors • However much of data in MPMIS needs to be further validated and the application of the system more extensively tested
	(2) Mechanisms for effective multi-sectoral policy making;	<ul style="list-style-type: none"> • NSC, SSC, CCC • DMPM personnel 	<ul style="list-style-type: none"> • Establishment of NSC, SSC, CCC enabled enhanced cross-sectoral decision-making and inputs for policy-making • However, some agencies less engaged (e.g., difficulty in engaging MoTOUR in accepting eco-certification scheme for tourism operators; participation of tour operators in committees less active) • Frequent changes in representatives to various committees made their functioning less efficient
	(3) Local communities involved in marine parks management and share access to benefits of biodiversity conservation by generating alternative livelihoods;	<ul style="list-style-type: none"> • DMPM personnel • Community stakeholders 	<ul style="list-style-type: none"> • Direct involvement of communities in formulation of MPA management plans was limited • Malaysia management system for MPs inherently more 'top-down' than community-based • However, high level of community benefit sharing achieved through project's livelihood programs

Evaluation Criteria	Questions	Sources	Key Findings
	(4) Tourism operators integrated into protected area management and reduction of the direct and indirect impacts of tourism activities on biodiversity;	<ul style="list-style-type: none"> • DMPM personnel • Tourism operators • Community stakeholders 	<ul style="list-style-type: none"> • While significant efforts were made to improve cooperation between tourism operators and MP managers, this had limited traction; leadership among tourism operators was not always sufficient to bring about tangible improvements (e.g., 5 resorts in Redang failed to connect to STP despite completion of new plant) • Larger tourism operators need to assume greater responsibility to convey conservation messages to guests
	(5) MPUs follow international standards of protected area management and achieve efficient enforcement and prevention of violations;	<ul style="list-style-type: none"> • DMPM personnel • Enforcement personnel • Community stakeholders 	<ul style="list-style-type: none"> • Trends of arrests reported to be decreasing, due to project programs implemented with fishermen, and through stakeholder consultations • Enforcement manual produced • capacities for enforcement increased-156 staff manning patrol boats, and trained and given authority to make arrests • incentives and disincentives being applied • in Tioman, community members engaged to act as 'eyes and ears' for enhancing enforcement effectiveness

Evaluation Criteria	Questions	Sources	Key Findings
	(6) Raised awareness of the importance of biodiversity conservation and marine park system in Malaysia among selected target groups; and	<ul style="list-style-type: none"> DMPM personnel Community stakeholders 	<ul style="list-style-type: none"> Project has raised community awareness of importance of marine biodiversity Communities have expressed that they consider the marine resources as their 'heritage' and are more committed to protect them, especially because they are the source of their livelihood Greater awareness among State agencies of the need for improved conservation of marine biodiversity Ministry of Tourism has been slow to pick up importance of marine biodiversity conservation as a foundation for sustainable tourism
	(7) Framework for strong advocacy from stakeholders for the conservation in the marine parks of Malaysia	<ul style="list-style-type: none"> DMPM personnel Community stakeholders NGOs 	<ul style="list-style-type: none"> NSC/SSC/CCC structure allows issues of concern at community level to be raised to higher level for attention Rakan Park (in Tioman) and Reef Rangers (in Redang) conduct advocacy and awareness-raising activities
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?	How would you rate the level of efficiency of MPA project implementation in terms of:		

Evaluation Criteria	Questions	Sources	Key Findings
	a. utilization of funds provided by GEF/UNDP	<ul style="list-style-type: none"> Budgets and financial reports Audit reports 	<ul style="list-style-type: none"> The project was awarded fair achievement by the National Audit Department The project demonstrated efficient utilization of UNDP funds with a 100% expenditure of funds (actual expenditure of US\$1,946,408 against planned expenditure of US\$1,946,386). The slight difference in figures may be due to currency fluctuations.
	b. leveraging of funds from other sources	<ul style="list-style-type: none"> Budgets from GoM contributions 	<ul style="list-style-type: none"> GoM cofinancing exceeded expected contributions as defined in Project document Maritime Enforcement Agency—confiscate and dispose of vessels on court orders—cooperation with DMPM for sinking for use as artificial reefs Other CSR done thru projects: beach cleanup, coral cleanup, raise awareness in corporate sector—communications plan outlines KPIs for 4 CSR per year
	c. timeliness of implementation	<ul style="list-style-type: none"> Project progress reports, MTR 	<ul style="list-style-type: none"> 2 years' delay in project start-up two extensions were required as a result of delay however, with changes in project management personnel, project was able to rapidly accelerate its accomplishment of targets in final years of implementation

Evaluation Criteria	Questions	Sources	Key Findings
	d. forging partnerships and linkages	<ul style="list-style-type: none"> • Reef Check • DMPM 	<ul style="list-style-type: none"> • Project forged partnerships with academia through signing of MoUs (University of Malaya in 2011, Universiti Malaysia Terengganu in 2011 and Universiti Kebangsaan Malaysia in 2013) as well as NGOs (ReefCheck) during implementation • DMPM sits on technical committee for Bay of Bengal LME and CTI • Other CSR done thru project-beach cleanup-coral cleanup, raise awareness in corporate sector—communications plan outlines KPIs for 4 CSRs per year • Maritime Enforcement Agency—confiscate and dispose of vessels on court orders—cooperation with DMPM to sink vessels for use as artificial reefs
	e. utilization of local resources (human and other natural resources)	<ul style="list-style-type: none"> • DMPM • local communities 	<ul style="list-style-type: none"> • Community members participated actively in CCC, and engaged in project-supported livelihood activities • Rakan Park (in Tioman) and Reef Rangers (in Redang) conducted advocacy and awareness-raising activities • Local community members served as ‘eyes and ears’ for enforcement • Project relied upon local ecological knowledge (LEK)—gathered from local participants—to establish data baselines

Evaluation Criteria	Questions	Sources	Key Findings
<i>Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental strengths or risks influencing the sustainability of long-term project results? What mechanisms /structures has the project put in place to ensure sustainability?</i>	Does the DMPM have adequate staff, with sufficient preparation and knowledge, to assume responsibility for taking over functions and activities begun under the project?	<ul style="list-style-type: none"> DMPM (federal and state state levels) and also organization chart 	<ul style="list-style-type: none"> key personnel originally hired through the project have been absorbed and regularized as DMPM staff DMPM officers' training in Bali and through activities with Reef Check Large expenditure of time and effort of Marine Park staff in collecting fees, has taken away from the time available to be spent on core duties of monitoring, enforcement—resulting in perceived lack of personnel Staff training provided through the project was limited; level of technical knowledge of some park staff in marine biology, conservation, and ecology not sufficient to ensure effective marine park management
	What are the revenue-generating schemes implemented by DMPM?	<ul style="list-style-type: none"> DMPM Business Plan report 	<ul style="list-style-type: none"> There is MYR 5 user fee charged to local visitors, MYR 30 to foreigners, which goes into the Marine Park Trust Fund—the fund is for use in MP management functions Increasing the user fee is being considered other use fees are also charged—for dive operations, filming, boat berthing etc. private sector also contributes to the trust fund
	Does DMPM generate and receive enough revenue for management of the parks?	<ul style="list-style-type: none"> DMPM 	<ul style="list-style-type: none"> DMPM indicated that finances are sufficient for their needs DMPM received funding at the State and Federal levels.

Evaluation Criteria	Questions	Sources	Key Findings
	Are community leaders in the project sites continuously playing major roles in the activities initiated under the Project?	<ul style="list-style-type: none">Community and DMPM	<ul style="list-style-type: none">Community leaders are active in the CCCs and SSCsPlans for continuing the NSC, SSCs and CCCs are being discussed, with the proposed option that project SSCs and CCCs will be institutionalized at the local level
	Are there networks or advocacy groups formed on biodiversity conservation or law enforcement/protection?	<ul style="list-style-type: none">Advocacy output 7 – Rakan Park and Reef watchers, MENGO – environmental NGO group	<ul style="list-style-type: none">Rakan Park and Reef Rangers were set up as a result of the project. However, it is difficult to sustain the momentum as the groups are not independent yet. They rely on the project activities to participate in programmes.Links were established with other national/international NGO groups through the NSC (e.g. Reef Check, MENGO, WWF-Malaysia, MNS). There is a need to enhance collaboration and explore opportunities to align their program priorities with DMPM.

Evaluation Criteria	Questions	Sources	Key Findings
	How active are the concerned State governments and local communities in passing and implementing resolutions supportive of the programs initiated under the project?	<ul style="list-style-type: none">• SSC meeting notes	<ul style="list-style-type: none">• Through SSC and CCC meetings issues are brought up and discussed. SSC meetings are chaired by the State UPEN (EPU state level).• Frequent rotation of committee members for SSC impairs effectiveness of committees• Need greater awareness raising on the importance of MPAs and DMPM efforts, which could be carried out through State and District Action Council monthly meetings, and possibly other existing platforms• As part of the Project, Community Consultative Committees were set up at all the project sites. DMPM KPIs stipulate at least two CCC meetings a year. Through this mechanism community stakeholders sat down together for the first time to discuss marine park and coral reef management issues

Evaluation Criteria	Questions	Sources	Key Findings
	Are the resource conservation and management strategies of the project now fully operational?	<ul style="list-style-type: none">• Project annual report	<ul style="list-style-type: none">• MPA Management plans are still being finalized and require further validation• Water quality monitoring now embedded into DMPM structure; department intends to continue coastal water quality sampling/monitoring after the project• Community engagement and awareness work embedded as DMPM budget line item• As a result of project initiatives Community is more engaged to carry on conservation work
	How involved are the key stakeholders, including NGOs and local communities, in the implementation of MPA activities?	<ul style="list-style-type: none">• Project annual report, interview notes, NGO interviews	<ul style="list-style-type: none">• As a result of project initiatives Community has greater understanding and is more accepting of the role of MPAs in their area• Reef Check NGO is very active in coral reef management in Eastern Peninsular Malaysia• Principal engagement was with ReefCheck, opportunities for enhancing ties with other NGOs need to be explored

Evaluation Criteria	Questions	Sources	Key Findings
	Has the project stimulated creation of new or increased opportunities for sustainable livelihood?	<ul style="list-style-type: none">• Interview notes and project annual report	<ul style="list-style-type: none">• Bakery businesses established in Tioman and Redang (facilities and training provided)• job opportunities enhanced through “English for Tourism” instruction• income increased through shift from fisheries to tourism• income increased through issuance of official boat licenses• training in boat repair and maintenance provided the knowledge for general maintenance• other livelihood opportunities (e.g., kurupok, mee kuning, batik, home stay) are of interest for further development

Evaluation Criteria	Questions	Sources	Key Findings
Overall Project Design (including the Logical Framework)	Identify any features of the MPA project which constituted.... major strengths in Project design	<ul style="list-style-type: none"> Interview notes, project document and inception report 	<ul style="list-style-type: none"> Platforms established at the local, state and national levels (i.e., NSC, SSC, CCC) that allow for horizontal integration (vertical integration needs to be further enhanced) Community livelihood opportunities enhanced and linked to conservation Enforcement processes enhanced through project outputs such as: <ul style="list-style-type: none"> - enforcement manual - training, increasing staff capabilities and authority (around 156 staff that man boats for patrolling have been trained) - training of trainers
	...or major weaknesses in Project design	<ul style="list-style-type: none"> Interview notes, project document and inception report 	<ul style="list-style-type: none"> Project framework included too many outcomes- original 40 outcomes were reduced to 7, but this is still quite complex and ambitious Assessment of project risks needed to be more thorough (e.g., risks relating to role of MoTOUR, importance of passage of Marine Parks Act not fully appreciated)

Evaluation Criteria	Questions	Sources	Key Findings
Project Structure: Management Framework	Identify any features of the MPA project which constituted.... major strengths in management structure	<ul style="list-style-type: none"> Annual Performance Report and Project Implementation Review 	<ul style="list-style-type: none"> Absorption of project staff into permanent staff of DMPM
	...or major weaknesses in management structure	<ul style="list-style-type: none"> Annual Performance Report and Project Implementation Review 	<ul style="list-style-type: none"> Valuable time was lost at the beginning of project due to lengthy government procurement process non-performance of consultants was not properly controlled/managed there was no marine biologist on project consultant team Frequent reassignment/relocation of involved staff adversely affected implementation efficiency on the ground For those activities beyond the assigned responsibility or expertise of DMPM, provision should have been made to identify appropriate partners (e.g., NGOs) to guide and facilitate initiatives (e.g., links with tourism)

Evaluation Criteria	Questions	Sources	Key Findings
Project Finance and Co-Finance	Were variances encountered relative to planned and actual expenditures of the project?	<ul style="list-style-type: none"> Annual Performance Report and Project Implementation Review, Budget reports 	<ul style="list-style-type: none"> Total project expenditure exceeded the planned expenditure particularly due to increased GoM cash allocation from US\$1,012,229 to US\$2,183,881 and GoM in-kind contribution from US\$225,000 to US\$369,056. <p>The disbursement of GEF funds followed a slow start in 2007 and 2008 but started to pick up gradually. However, the data on planned budget needs to be verified.</p>
	How much funding assistance was leveraged by the project from other sources?	<ul style="list-style-type: none"> Annual Performance Report and Project Implementation Review, budget reports 	<ul style="list-style-type: none"> Early review of financial data suggests that GoM contribution exceeded original proposed contribution (US\$1,012,229 to US\$2,183,881 in terms of cash contribution and US\$225,000 to US\$369,056 in terms of in-kind contribution).
Monitoring and Evaluation	<p>Please assess the M & E system implemented by the project in terms of:</p> <p>M & E Design at project start</p>	<ul style="list-style-type: none"> Annual Performance Report, Project Implementation Review, MTR 	<ul style="list-style-type: none"> Baselines not clearly established for many parameters; indicators not well articulated, nor matched to appropriate levels in project framework Baseline data gathered in PDF-B (Coral Cay surveys) but not applied accurately; indicators needed revision during inception phase; revised indicators not applied in a systematic way

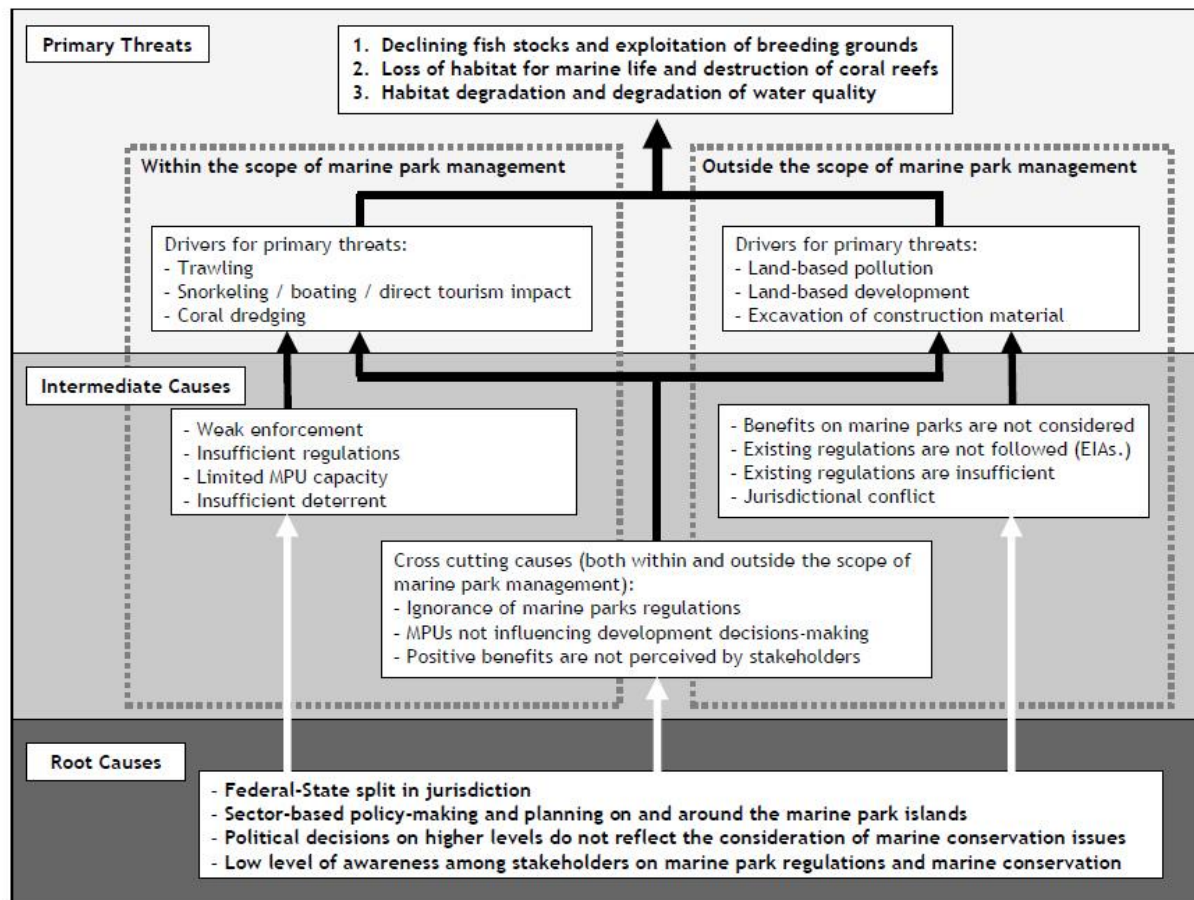
Evaluation Criteria	Questions	Sources	Key Findings
	M & E system implementation	<ul style="list-style-type: none"> Annual Performance Report, Project Implementation Review, MTR 	<ul style="list-style-type: none"> Prescribed M&E steps were followed at specified stages (i.e., MTR, PIRs, etc.) however, inherent weaknesses in indicators made it difficult to conduct meaningful M&E
	Overall quality of M & E system	<ul style="list-style-type: none"> Annual Performance Report, Project Implementation Review, MTR 	<ul style="list-style-type: none"> Frequent change of staff made the trail of institutional knowledge hard to grasp
Capacity of Executing and Implementing Agencies	Performance of UNDP in carrying out supervision and backstopping functions to the MPA project	<ul style="list-style-type: none"> DMPM staff and project review committee minutes 	<ul style="list-style-type: none"> The IA indicated that UNDP was very helpful in providing needed supervision and backstopping; Gave advance notice of documents/reporting needed, provided samples of relevant documents as models
	Strengths of DMPM in implementing the project	<ul style="list-style-type: none"> UNDP and project review committee minutes DMPM interviews 	<ul style="list-style-type: none"> Adaptable and flexible High level of dedication and commitment
	Weaknesses of DMPM in implementing the project	<ul style="list-style-type: none"> Interview notes 	<ul style="list-style-type: none"> For areas beyond their scope and expertise, need to engage other agencies or NGOs

Evaluation Criteria	Questions	Sources	Key Findings
Mainstreaming	Have plans, programs or institutional structures introduced by the MPA project, including conservation, protection, coordinating bodies, and economic strategies like ecotourism, been incorporated into laws, policies, or local development plans or institutional structures?	<ul style="list-style-type: none"> Interview notes 	<ul style="list-style-type: none"> Addendum chapter on marine parks planning integrated into the 2nd National Physical Plan The project has generated a wealth of information that can be used in reviewing and updating the National Biodiversity Policy according to the Aichi targets, and for reviewing and updating National Ecotourism Plan As part of the project, an Island Monitoring Committee for Tioman was proposed during the 3rd Pahang SSC meeting with the aim to improve environmental issues in Tioman. It was proposed that the Tioman Development Authority be appointed as chair and secretariat for the committee.
	Have the conservation and protection efforts that were promoted by the project gained the acceptance of the community?	<ul style="list-style-type: none"> Interview notes 	<ul style="list-style-type: none"> Community acceptance and support gained through CCCs, Rakan Park, Reef Watchers and the snorkel guide awareness programs conducted in collaboration with Reef Check.
Country Ownership	Have the concerned government agencies allotted financial resources and/or passed/issued policies and regulations to continuously implement the activities initiated under the project?	<ul style="list-style-type: none"> Budget reports, Annual reports 	<ul style="list-style-type: none"> Drafting of Marine Parks Act MPA Consultative Policy and Business Plan drafted Addendum chapter on islands planning integrated into the 2nd National Physical Plan. The project has generated a wealth of information that can be used in reviewing and updating the National Biodiversity Policy according to the Aichi targets

Evaluation Criteria	Questions	Sources	Key Findings
			<ul style="list-style-type: none"> The project has generated a wealth of information that can be used in reviewing and updating National Eco tourism Plan
<i>Replication, Expansion, and Catalytic Role</i>	Are there cases in which the design of the MPA project, or any of its major strategies and activities, have been replicated outside the project sites?	<ul style="list-style-type: none"> Interview notes, newspaper cuttings, annual reports 	<ul style="list-style-type: none"> Replication of Project livelihood activities in Perhentian Perhentian community work--Ecoteer has set up a "CCC" on Perhentian—working at village level 2009-2010—ReefCheck initiated activities in Perhentian because project not working there-funded by UNDP SGP-trained in dive and snorkel skills and awareness Marine survey expedition was above and beyond project needs, generated additional useful data LEK studies replicated in other sites-DMPM paid for studies in 24 other islands Proposal to replicate MPA management plans on other islands not carried out because initial MPA plans not finalized Expansion: use of MPGIS for e-permits, etc.; it has become all-purpose tool for various administrative functions as well as marine park management Marine Parks Dept is leading the way for livelihood even beyond those ministries mandated for social improvement-Rebecca Greenspan (#2 in UNDP) brought to site and saw CCC meeting-- they said the first time they had done anything like that which goes

Evaluation Criteria	Questions	Sources	Key Findings
			beyond project mandate <ul style="list-style-type: none">• MPA State Steering Committee was initiated for the state of Kedah in 2012
	Are there cases in which DMPM has assumed responsibility for functions that are normally outside its mandated responsibilities, in order to more strongly support the conservation and sustainable development objectives of the project?	<ul style="list-style-type: none">• Interview notes	<ul style="list-style-type: none">• Marine Parks Dept is leading the way for livelihood even beyond those ministries mandated for social improvement-Rebecca Greenspan (#2 in UNDP) brought to site and saw CCC meeting-- they said the first time they had done anything like that which goes beyond project mandate• Water quality monitoring initiatives

Annex F: Threats Analysis

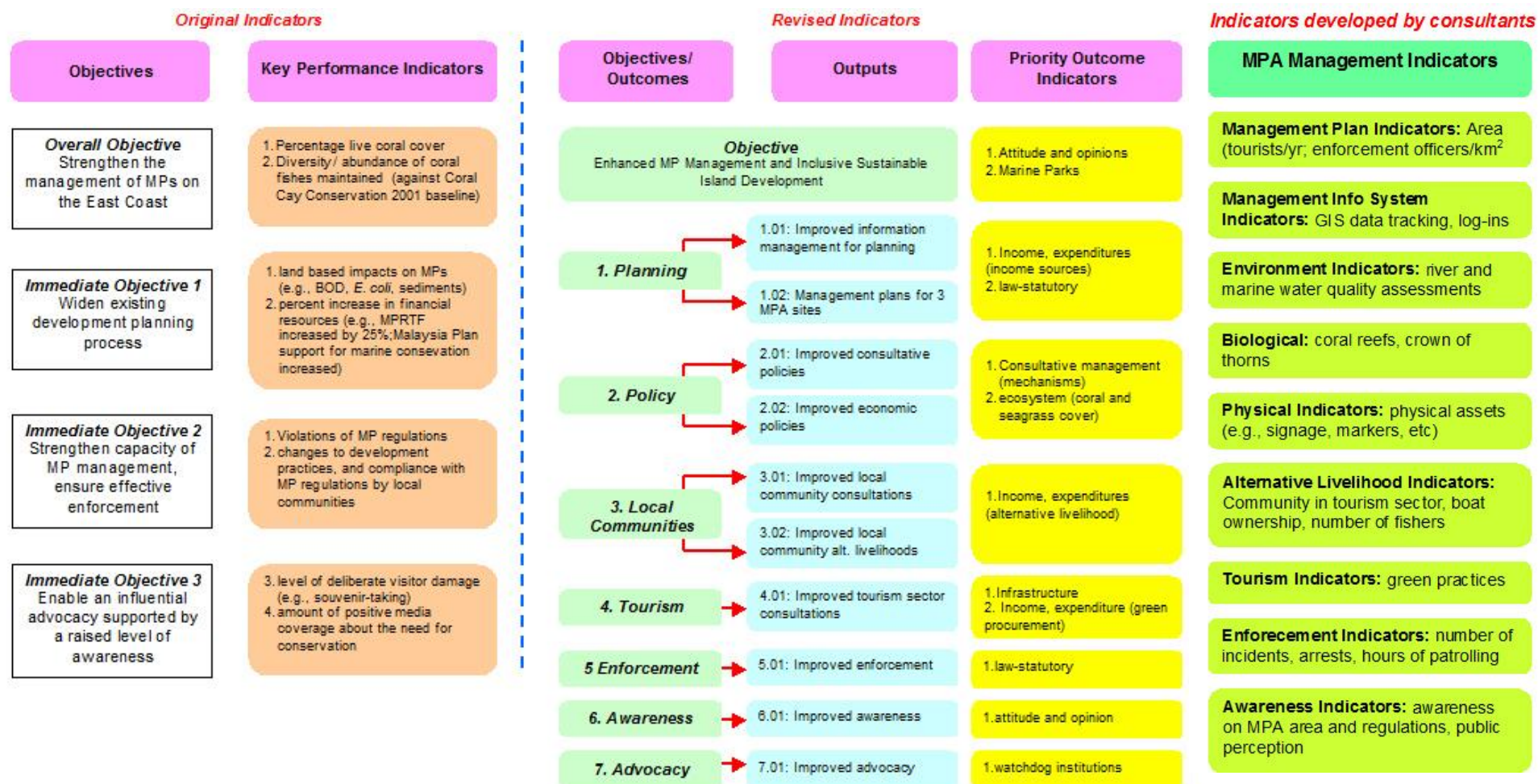


Annex G: Changes to Logical Framework, Project Objective, and Indicators

Table G-1. Summary of Changes to Logical Framework

Vertical logic		Why
Before Inception	After Inception	
Goal	No change	Not allowed by GEF in the Inception Phase
Immediate objectives	Removed	Subsumed to combinations of Outcomes since not in UNDP vertical logic terminology.
Purpose	Objective	Title changed, statement the same, to match UNDP terminology and because only one Objective per Project is allowed
Outcomes (7)	No change	Advocacy (Outcome 7) subsumed to Policy (Outcome 2) because they should be fully integrated.
Outputs (40)	Outputs (10)	Reduced from 40 to 10 to simplify delivery.
Activities	Activity module	9 stage phased modular approach to delivering activities to catalyse a process approach.
Activities	Activities	List from Project Document to be reconciled at the stocktaking activity module phase.

Figure G-1: Initial Objectives and Key Performance Indicators



Source: Adapted from GoM, UNDP, GEF (2006, 2007).

Annex H: Matrix for Monitoring the Achievement of Project Outcomes

PROJECT GOAL: To ensure the conservation and sustainable use of marine biodiversity in Malaysia and sustainable island development

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
OBJECTIVE: Achieving Enhanced Marine Park management and Inclusive Sustainable Island Development	Attitude and opinion	20% respondents indicate moderate or more support for the effectiveness of DMPM to manage the marine parks	50% respondents indicate moderate or more	Not reported in MTR. As of 30 June 2010, 35% respondents indicated moderate or more support. No surveys were carried out for 2011 and 2012. It was reported in the PIR that a survey would be conducted at the end of the project. The project has conducted considerable awareness activities and alternative livelihood trainings while at the same time empowered the communities through CCCs and the respective business cooperatives. It was evident during the TE interviews, the community	<ul style="list-style-type: none"> i) Project reports did not provide clear indication of how the baseline data was collected and monitored. However, from the TE interviews, it was clear that the community had been empowered and activated in terms of their attitude and opinion towards support for the effectiveness of DMPM to manage marine parks. ii) Baseline stocktaking surveys was indicated in Quarter 4 of the consultants' report but the activity was not linked directly to project monitoring. iii) End of project surveys were mentioned in the Consultants' report for Quarter 15. Results may have been included in the MPMIS as the Quarterly reports did not provide detailed findings of the survey.
	Marine Parks Area	40 PAs with an area of 569,447.7 hectares	10% increase of the total area to 626,392 hectares	From 40 to 42 MPAs, 569,448 to 575,848 hectares representing a 1.1% increase versus the 10% target	<ul style="list-style-type: none"> i) MPA area was added as an indicator during inception. ii) Based on the TE team's analysis, there were no outcome that were specifically developed to advocate for increased MPA area, hence, in the TE team's opinion, this indicator while it had good intentions had brought additional burden to the project to fulfill. In addition, the two new MPAs were not direct advocacy from the project but policy adopted by the State Government at that time to increase MPA.

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
OUTCOME 1: PLANNING Adaptive Marine Park management by a mechanism of cross-sectoral information sharing and knowledge transfer into decision-making bodies.	Consultative Management	No consultative mechanism exist	A functional consultative mechanism established	Three functional SSCs and CCCS were established and institutionalized into marine park management at local level. This provided an important platform for local issues to be discussed, documented and brought up to federal levels. At the federal level the NSC played a critical role in facilitating greater collaboration amongst the different agencies.	i) The institutional framework of NSC, SSC and CCCS provided a critical platform for local to state and federal level stakeholders to highlight and discuss issues relevant to the project. ii) It was evident during TE review that greater collaboration and integration were demonstrated in relation to marine resource management amongst stakeholders with varying roles. iii) It is important the mechanism continues after the project. The TE proposes that vertical integration amongst the three committees to be enhanced via a workshop bringing all the stakeholders together either once a year or in two years.
	Ecosystem	State of Coral reefs and seagrass cover within the Marine Parks 38% Sibutu-Tinggi 47% Tioman 45% Redang	State of Coral reefs and seagrass 50% Sibutu-Tinggi 60% Tioman 60% Redang	Based on the Reef Check Malaysia status reports for 2011, live coral cover for Tioman and Redang islands were (48.93%) and (47.9%) respectively as opposed the national average of 44.19%. The results varied as in 2010, live coral cover for Tioman was reported to be 61% based on the RCM findings. The reduction in 2011 may have been due to the mass coral bleaching incident in 2010.	i) Coral reef and seagrass cover, though different in nature were lumped together for baseline monitoring. ii) It was not clear how the baseline level were obtained as the figures were different from the results obtained from the 2000 Coral Cay survey that was funded as part of project development budget. iii) It was evident that the project collaborated with RCM in assessing the status of ecosystem health. Quarterly reports indicated training provided to DMPM officers. It was hoped that these officers would carry out ecosystem monitoring for the project. However, it was not clear to what extent this was carried out. This may be due to the fact that a senior biologist meant to be engaged as part of the consultant team to guide ecological aspects of the project was not realized.

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
OUTCOME 2: POLICY Mechanisms for effective multi-sectoral policy making, development planning and an improved financial sustainability.	Income and Expenditure	2 sources of funding	4 sources of funding (increase in 50% of revenue)	DMPM business plan completed and proposals submitted to DMPM, additional mechanisms identified such as research permits, diving fee, underwater filming fee, fee and permit to use the MPA premises for permissible activities. In 2012, cabinet approved increase of fee schedule, foresee a 6-month transition to implement and roll out plan.	i) Mechanisms for improving funding options identified and approved at cabinet level but not implemented in order to provide sufficient time for the plan to be rolled out. Hence target of 50% increase in revenue may not have been achieved (no specific revenue data seen). ii) Need to address transaction and administrative costs involved in fee collection. A comment by MPA officers that almost 40% of human resource is used to collect fees hence, diverting attention from park management (source: meeting minutes). iii) The MPA trust fund plays an important role in the sustainability of MPA management. The trust fund received MYR36.6 million up to 1996. However, the balance was MYR1.4 in 2010. There is a need to strategize the utilization and management of the fund to ensure its sustainability. The TE proposes that the MPA trust fund be strengthened with expert guidance from institutions that are experienced in implementing and supporting conservation trust funds such as GEF or the WWF network.
	Law – Statutory	No specific Marine Protected Area law	Marine Parks Act and relevant regulations and guidelines established	The acceptance of the draft Marine Park Act will serve the management of marine resources better and strengthen the DMPM as the custodian of MPA management. The AG Office has advised that the provisions in the Act are subsumed under the fishery Act which is being revised at the moment to accommodate the decision by the AG. The Marine Park Act need to be approved in order to legitimize the zoning and management plans for the MPA. At the moment the Marine Parks Council meetings are also chaired by the Department of Fisheries.	i) The adoption of the draft Marine Park Act is crucial in facilitating DMPM in managing MPAs in Malaysia. The TE notes that efforts have been made to support the adoption of the Act. ii) The TE proposes continuous advocacy for passage of the Marine Parks Act and note that support at the highest political level (such as through Inter-Ministerial platform and the National Biodiversity Council) is critical for the adoption of the draft Marine Park Act.

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
OUTCOME 3: LOCAL COMMUNITIES Involvement of local communities in Marine Park management and enabling them to benefit from biodiversity conservation by generating alternative livelihoods.	Income and Expenditure	No alternative livelihood at present	Increase in income level of the community by 50%	Stocktaking exercise through surveys amongst the community was undertaken at the beginning of the project. As of 30 June 2010, 140 participants from the local communities attended the business development and training skills organized by the project. Training on entrepreneurship and business management was undertaken in 2011. A target was set to establish three cooperatives. However, only two cooperatives were set up due to the decision of the communities. Business plans for the three cooperatives were developed and implemented. On the request of the communities, DMPM provided capital funds for the purchase of equipment for Redang and Tioman via co-funding. Numerous trainings and initiative had been undertaken to elevate the capacity and enhance the alternative livelihoods of the community. The cooperative in Tioman was successful in securing a MYR10,000 training grant with the help of the alternative livelihood consultant of the project. It was reported that the income level would be assessed by the time of the Final Evaluation, however, this had not been carried out at the time of the TE.	i) It was evident from the TE review that the communities have benefited from the project in terms of raising their livelihood options and at the same time increasing their awareness of the importance of MPAs. The project provided viable alternative livelihoods within coastal communities contributed to reducing stress on biodiversity resources.
OUTCOME 4: TOURISM SECTOR Tourism operators integrated into Protected Area Management and reduction of the direct and indirect impacts of tourism activities on biodiversity.	Infrastructure	100% from government expenditure	80% from government and 20% from concessionaire	The indicator was meant to demonstrate greater private sector involvement in tourism management on the islands. However, as of 30 June 2011 the project indicated that it will officially write to UNDP for the change in the indicator due to the inherent difficulty in fulfilling it due as many of the local resorts do not have Certificates of Fitness or valid business operating licenses.	i) It is not clear how this indicator would demonstrate clear achievements in addressing direct and indirect tourism impacts on the MPAs that were related to waste and sewage management. ii) The MTR evaluated the tourism sector consultation and environment, which were not part of the project indicators but would have been more suitable indicators for the tourism sector. iii) The project did not have a clear strategy and plan to influence attainment of the target.

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
	Income and expenditure	No green procurement	Conduct 6 workshops on environmental best practices and eco-certification scheme which include green procurement practices for resort, chalet and tour operators	Eco-certification and Best Practices Training for tourism operators were conducted at the project sites. The eco-certification scheme and Environmental Best Practices booklet were produced. However, eco-certification ratings were not endorsed by the Ministry of Tourism. In addition, an underlying difficulty with certification remains, as local resorts that are not officially recognized and awarded with Certificate of Fitness do not meet the pre-requisite of being accredited.	<p>i) Again, it was not clear how income and expenditure was a relevant indicator to demonstrate the integration of tourism operators into MPA management and how the indicator would show progress to reducing waste and sewage issues as a result of tourism expansion.</p> <p>ii) The TE suggests that water quality including facilities and systems in place to address waste and sewage management issues would be more suitable indicators. It should be noted that as part of the project, river and marine water quality monitoring were initiated and provided valuable results for MPA management. Considerable efforts were undertaken to collaborate with other relevant agencies at the State and Federal levels. However, these were not part of the final indicators for monitoring project progress even though these were part of the original project document indicators.</p> <p>iii) It seems that the legality of local operators remain a critical issue to be addressed before meaningful steps to engage local resort operators can be carried out. The TE recommends that the relevant agencies involved address this matter through an Action Plan.</p> <p>iv) A strategy for adoption of eco-certification was missing. This needs to be revisited and considered more seriously after the project ends.</p>
OUTCOME 5: ENFORCEMENT MPD follow international standards of protected area management and achieve efficient enforcement and prevention of violations.	Law –Statutory	No specific Marine Protected Area law Strengthened enforcement	Marine Parks Act and relevant regulations and guidelines established	Marine Park Act drafted and to be incorporated into the Fisheries Act. The Enforcement Manual has been issued to DMPM and relevant agencies. About 156 staff had been trained. Training the trainer courses were also conducted. Due to the project, personnel previously Grade G or A70, who had no arresting authority, were equipped with the relevant knowledge and skills to be granted such authority. In the past, in a team of 5 enforcement officers, only one officer had	<p>i) The project has demonstrated noteworthy improvements in terms of the development of an enforcement manual and at the same time equipping personnel with training. It has also significant progress by expanding the numbers of personnel equipped with arresting powers.</p>

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Status at TE	TE comments
				arresting power, now all members of the team have arresting power.	
OUTCOME 6: AWARENESS Raised awareness of the importance of biodiversity conservation and marine park system in Malaysia among selected target groups.	Attitude and Opinion	20% of respondents indicate moderate or higher level of awareness and understanding of the marine parks issues in Malaysia	50% respondents indicate moderate or more	Stocktaking findings indicated an awareness level among locals was 61% and the Reef Check Marine Education Program indicated 93% awareness amongst school children as of June 2010. Efforts such as the Rakan Park awareness campaign, Marine Awareness Seminars, Reef Watchers training and the development of a communication plan including the collaboration with the National Film Department of Malaysia has resulted in increased awareness among community members and the public.	i) The MTR provided a MS rating as its analysis shows that there were increased awareness among the local communities in accepting the MPA, however understanding coral reef ecology is still limited amongst stakeholders though it is the foundation for understanding effective MP management. ii) Considerable and commendable efforts have been undertaken by the project to increase the level of awareness the relevant stakeholders. Similar to the view of the MTR, a gap exists in equipping the stakeholders, particularly local DMPM officers, with practical and operational understanding of the ecological aspects of MPA management. This was partly due to absence of a senior ecologist to guide greater understanding and uptake of ecological priorities in the project.
OUTCOME 7: ADVOCACY Framework for strong advocacy from stakeholders for the conservation in the marine parks of Malaysia.	Watchdog institutions	No specific watchdog mechanism in the form of institutions for marine protected areas.	At least one national and local level watchdog mechanism is established	3 watchdog organizations were established, including the Rakan Park, Reef Rangers and Reef Watchers. Reef Rangers were engaged through various activities such as reef and beach clean-ups, assembly of buoys and markers. Reef Watchers were provided training using the new Enforcement Manual but were not provided with arresting powers.	i) Achievements were beyond targets with the establishment and operations of Reef Watchers and Reef Rangers. ii) It was evident from the TE interviews that the community was interested in the advocacy activities performed by groups such as Reef Watchers. iii) Continued support and strategies need to be devised to ensure that the groups achieve self-sufficiency and momentum.

Color coding: Green: completed, indicator shows successful achievement; Yellow: indicator shows expected completion by the end of the project

Red: indicator shows poor achievement – unlikely to be completed by project closure; No color: indicator not evaluated

Annex I: Comments and Recommendations on Project Baselines and Indicators

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Comments on Indicators, baselines and targets
OBJECTIVE: Achieving Enhanced Marine Park management and Inclusive Sustainable Island Development	Attitude and opinion	20% respondents indicate moderate or more support for the effectiveness of DMPM to manage the marine parks	50% respondents indicate moderate or more support for the effectiveness of DMPM to manage the marine parks	<ul style="list-style-type: none"> Attitude and opinion indicators are difficult to measure, require extensive surveys by qualified enumerators
	Area	area in hectares	10% increase of the total area	<ul style="list-style-type: none"> The increase area target is not reflective of other activities in the project; the addition of two more marine parks during the project timeframe is not attributable to the project, yet "claimed" as being a result of project efforts
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>Ecosystem indicator (included as an indicator for Outcome 1) should have been used here instead</i>
OUTCOME 1: PLANNING Adaptive Marine Park management by a mechanism of cross sectoral information sharing and knowledge transfer into decision-making bodies.	Consultative Management	No consultative mechanism exist	A functional consultative mechanism established	<ul style="list-style-type: none"> This is a clear, concrete, achievable indicator, however it should have been applied for Outcomes 2 and 3 (for establishment of NSC, SSCs, and CCCs)
	Ecosystem	Coral reef and seagrass cover within the Marine Parks: 38% Sibu-Tinggi 47% Tioman 45% Redang	Coral reef and seagrass cover increased: 50% Sibu-Tinggi 60% Tioman 60% Redang	<ul style="list-style-type: none"> Extent of coral reef and seagrass cover, though representing two different biota, were lumped together as a single indicator It was not clear how the baseline levels were obtained as the figures were different from the results obtained from the 2000 Coral Cay survey that was funded as part of project design
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>Ecosystem indicator should have been used as a higher level indicator for Project Objective instead</i> <i>Baseline should have been more clearly reconciled with Coral Cay data</i> <i>This outcome focuses on improvement of cross-sectoral information sharing, indicator for establishment of MPMIS should be included here</i> <i>This outcome also focuses on development of management plans for 3 MP sites, indicator for the plans should be included here</i>

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Comments on Indicators, baselines and targets
OUTCOME 2: POLICY Mechanisms for effective multi-sectoral policy making, development planning and an improved financial sustainability.	Income and Expenditure	2 sources of funding	4 sources of funding (with 50% increase in revenue)	<ul style="list-style-type: none"> The indicator is reasonable for the financial sustainability aspect of this outcome
	Law – Statutory	No specific Marine Protected Area law	Marine Parks Act and relevant regulations and guidelines established	<ul style="list-style-type: none"> Achieving target is affected by external political factors, requiring continuing advocacy However, target is judged to be achievable and project has facilitated progress towards passage of the act into law
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>The indicator for Consultative Management, which is included under Outcome 1, should have been included for this Outcome instead. With formation of the NSC and SSCs, establishment of mechanisms for consultative management was achieved</i>
OUTCOME 3: LOCAL COMMUNITIES Involvement of local communities in Marine Park management and enabling them to benefit from biodiversity conservation by generating alternative livelihoods.	Income and Expenditure	No alternative livelihood at present	Increase in income level of the community by 50%	<ul style="list-style-type: none"> Using an indicator for increased income is reasonable, but 50% increase may not be realistic Proliferation of more diverse livelihood opportunities could also provide another measure of achievement of this <u>alternative livelihood</u> outcome
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>An indicator for community involvement in MP management is not included. An indicator relating to the establishment of the CCCs would have demonstrated the achievement of this outcome</i>

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Comments on Indicators, baselines and targets
OUTCOME 4: TOURISM SECTOR Tourism operators integrated into Protected Area Management and reduction of the direct and indirect impacts of tourism activities on biodiversity.	Infrastructure	100% from government expenditure	80% from government and 20% from concessionaire	<ul style="list-style-type: none"> The indicator was meant to demonstrate greater private sector involvement in tourism management on the islands. However, as of 30 June 2011 the project indicated that it will officially write to UNDP to request a change in the indicator, due to the inherent difficulty in fulfilling it, since many of the local resorts do not have Certificates of Fitness or valid business operating licenses For tourism, the MTR evaluated consultations and environment-oriented activities—these were not part of the project indicators but would have been more suitable indicators
	Income and expenditure	No green procurement	Conduct 6 workshops on environmental best practices and eco-certification scheme which include green procurement practices for resort, chalet and tour operators	<ul style="list-style-type: none"> Again, it is not clear how income and expenditure are relevant indicators to demonstrate the integration of tourism operators into MPA management, nor how the indicator would show progress in reducing tourism impacts (i.e., due to waste and sewage)
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>Measurement of water quality at appropriate monitoring stations would have been a more appropriate indicator (it should also be noted that as part of the project, river and marine water quality monitoring were initiated, and provided valuable data for MPA management. Considerable effort was made to collaborate with other relevant agencies at the State and Federal levels to improve water quality).</i>

Objective/ Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Comments on Indicators, baselines and targets
OUTCOME 5: ENFORCEMENT MPD follow international standards of protected area management and achieve efficient enforcement and prevention of violations.	Law –Statutory	No specific Marine Protected Area law Strengthened enforcement	Marine Parks Act and relevant regulations and guidelines established	<ul style="list-style-type: none"> Achieving target is affected by external political factors, requiring continuing advocacy
	<i>Recommended Corrective Action</i>			<ul style="list-style-type: none"> <i>Indicators should have placed greater emphasis on other actions carried out under the project—development of enforcement manual, training, etc.</i>
OUTCOME 6: AWARENESS Raised awareness of the importance of biodiversity conservation and marine park system in Malaysia among selected target groups.	Attitude and Opinion	20% respondents indicate moderate or more level of awareness and understanding of the marine parks issues in Malaysia	50% of respondents indicate moderate or greater level of awareness and understanding of the marine parks issues in Malaysia	<ul style="list-style-type: none"> Indicator and target are reasonable, however, the means of verification are critical in determining the level of awareness-raising that has been achieved
OUTCOME 7: ADVOCACY Framework for strong advocacy from stakeholders for the conservation in the marine parks of Malaysia.	Watchdog institutions	No specific watchdog mechanism in the form of institutions for marine protected areas.	At least one national and local level watchdog mechanism is established	<ul style="list-style-type: none"> Indicator and target are reasonable

Annex J: Composition of Project Steering Committees**a. National Steering Committee (NSC) Members**

1. Secretary General, Ministry of Natural Resources and Environment (NRE) – Chairperson
2. Director General, DMPM
3. UNDP Malaysia
4. Representative from NRE (previously Conservation and Environmental Management Division, now Biodiversity & Forestry Management Division)
5. Legal Unit, NRE
6. Ministry of Agriculture & Agro-Based Industry Malaysia (MOA)
7. Ministry of Housing & Local Government (KPKT)
8. Ministry of Finance
9. Ministry of Tourism
10. Economic Planning Unit
11. State Economic Planning Unit (Terengganu, Johor, Pahang)
12. Tioman Development Authority (TDA)
13. Johor National Parks Corporation (JNPC)
14. Department of Environment
15. Department of Irrigation & Drainage
16. Department of Wildlife and National Parks Peninsular Malaysia (PERHILITAN)
17. Forestry Department Peninsular Malaysia
18. Department of Fisheries
19. Fisheries Development Authority of Malaysia (LKIM)
20. Sewerage Service Department
21. National Solid Waste Management Department
22. Department of Town and Country Planning (JPBD)
23. Malaysia Maritime Enforcement Agency (MMEA)
24. Marine Department Malaysia
25. Sabah Parks
26. Malaysian Environmental NGOs (MENGO)
27. Coral Malaysia
28. Malaysian Nature Society
29. WWF-Malaysia
30. Business Council for Sustainable Development Malaysia

b. Johor State Steering Committee (SSC) Members

1. Deputy Director, Johor EPU – Chairperson
 2. DMPM
 3. Johor DMP Office
 4. UNDP Malaysia
 5. Johor National Parks Corporation
 6. Ministry of Tourism Malaysia, Johor Office
 7. Mersing District Council
 8. Mersing Land Office
 9. Mersing District Office
 10. Marine Department Southern Region
 11. Department of Wildlife and National Parks, Johor
 12. State Forestry Department, Johor
 13. Department of Environment, Johor
 14. Johor Fisheries Office
 15. Johor Department of Irrigation and Drainage
 16. Sewerage Services Department, Southern Unit
 17. Department of Town and Country Planning, Johor
 18. Johor Biotechnology and Biodiversity Corporation
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- 19. National Water Services Commission, Southern Office
- 20. East Coast Economic Region Secretariat

c. Pahang SSC Members

- 1. Director, Pahang EPU – Chairperson
- 2. DMPM
- 3. Pahang DMP Office
- 4. UNDP Malaysia
- 5. Tioman State Assemblyman
- 6. Ministry of Tourism Malaysia, Pahang Office
- 7. Tioman Development Authority
- 8. Rompin District & Land Office
- 9. Malaysia Maritime Enforcement Agency (APMM) Eastern Region
- 10. Marine Department Eastern Region
- 11. Department of Wildlife and National Parks, Pahang
- 12. State Forestry Department, Pahang
- 13. Department of Environment, Pahang
- 14. Sewerage Services Department, Eastern Unit
- 15. Pahang Fisheries Office
- 16. Pahang Department of Irrigation and Drainage
- 17. Department of Town and Country Planning, Pahang
- 18. Pahang State Education Department
- 19. Tioman Local representative: Penghulu

d. Terengganu SSC Members

- 1. Director, Terengganu EPU – Chairperson
 - 2. DMPM
 - 3. Terengganu DMP Office
 - 4. UNDP Malaysia
 - 5. Ministry of Tourism Malaysia, Terengganu Office
 - 6. Kuala Terengganu City Council
 - 7. Malaysia Maritime Enforcement Agency (APMM) Eastern Region
 - 8. Marine Department Eastern Region
 - 9. Department of Wildlife and National Parks, Terengganu
 - 10. State Forestry Department, Terengganu
 - 11. Department of Environment, Terengganu
 - 12. Terengganu Fisheries Office
 - 13. Terengganu Department of Irrigation and Drainage
 - 14. Department of Sewerage Services
 - 15. Department of Town and Country Planning, Terengganu
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Annex K: Lessons Learned and Recommendations

1. Key Findings/Lessons Learned

The project, “Conserving Marine Biodiversity Through Enhanced Marine Park Management and Inclusive Sustainable Island Development” yielded numerous valuable lessons. These lessons were based on observations and discussion undertaken by the Terminal Evaluation consultants, in close coordination with staff of DMPM. Table K-1 below details the key findings and lessons learned, and links these to the specific cases or examples upon which they are based.

Table K-1. Findings and Lessons Learned

No.	Finding/Lesson Learned	Specific Case or Example Leading to Lesson
1	A sound technical understanding of biodiversity and ecosystems is the foundation that underpins effective protected area management.	In the project, the absence of a qualified marine biologist on the consultant team caused lack of credibility in a number of key outputs (e.g., MPA management plans, and monitoring of biodiversity status).
2	"Silo effect"—separating responsibility for terrestrial and marine management on small islands—makes finding workable solutions to shared problems more difficult.	<p>One of the biggest environmental threats to marine biodiversity is the (inadequacy of) the sewerage system; on Tioman, difficult terrain prevents setup of centralized system for sewage treatment; water supply is also a problem—some visitors have contracted diseases due to contamination</p> <p>There is Federal-State split in jurisdiction</p> <p>Sector-based, fragmented planning occurs on marine park islands</p> <p>Tourism operators need to follow EIA regulations; local authorities are not practicing adequate enforcement—many facilities operate informally</p>
3	A strong sense of community ownership, and recognition by communities that natural resources are their heritage (and realization that their livelihoods are closely tied to sustainable resource use) can contribute to a strong conservation ethic; even in systems that historically have applied a ‘top-down’ management approach (such as Malaysia’s), community-level support and cooperation are needed to curb adverse environmental impacts that could weaken conservation initiatives.	On Tioman they now consider the resources as their “heritage” and recognize that they are dependent upon them for livelihood
4	Creation of viable alternative livelihood opportunities can benefit marine biodiversity conservation efforts by (1) directly moving people away from destructive extractive fisheries practices, into services industries, and (2) fostering greater community cooperation, understanding and participation in	New livelihood opportunities on Redang have led to more young people staying on island

No.	Finding/Lesson Learned	Specific Case or Example Leading to Lesson
	conservation efforts.	
5	Complicated project design, without clear indicators, makes implementation and monitoring and evaluation more difficult.	<p>Project framework had too many outputs/outcomes—at inception, methodology was changed—simplified to produce current log-frame. Nonetheless project indicators remained complicated and required substantial resources to measure for some indicators. There was a lack of clarity how monitoring of some indicators demonstrate progress towards reducing threats to the MPA sites.</p> <p>Complexity of the design caused long delays at beginning, momentum picked up; cross-cutting nature of the project made it hard to hire the right consultants</p>
6	<p>Effective marine conservation within protected areas requires detailed studies of the resources in the area, and tailoring of zonation plans to fit the specific needs for the location, backed up by appropriate legislation and regulations.</p> <p>Effective marine conservation within protected areas requires detailed studies of the resources in the area, and tailoring of zonation plans to fit the specific needs for the location, backed up by appropriate legislation and regulations.</p>	<p>Use zones proposed in Marine Park Management Plans are not enforceable; the 2nm fisheries restriction still applies uniformly</p> <p>'People are fishing off the jetties all the time'</p>
7	Frequent changes in key personnel (whether in project staff, executing agency, or steering committees) makes project operations inefficient and can cause lack of continuity and considerable delays.	<p>personnel attending SC meetings are frequently changed</p> <p>Frequent staff rotation results in loss of local knowledge and experience, and difficulty in transferring skills</p>
8	In the absence of hard scientific data, local ecosystem knowledge (LEK) is an adaptive approach that can provide valuable information upon which preliminary planning can be based. However, the LEK information needs to be further ground-truthed and verified for more critical management decision-making.	Management plans were prepared for 3 sites using LEK—also zoning plans and resiliency studies
9	Strong interagency cooperation can greatly enhance project efficiency and result in cost savings.	<p>Maritime Enforcement Agency confiscates and disposes of vessels on court orders—through cooperation with DMPM, these were deployed for use as artificial reefs</p> <p>MPMIS developed by DMPM under the project can be used by other agencies</p>

No.	Finding/Lesson Learned	Specific Case or Example Leading to Lesson
10	Strong leadership and sense of commitment among project staff can catalyze positive changes that extend beyond the scope of the project itself.	<p>DMPM is leading the way for livelihood even beyond those ministries mandated for social improvement; Rebecca Greenspan (#2 in UNDP) brought to site and saw CCC meeting they said first time they had done anything like that goes beyond project</p> <p>DMPM has taken up the responsibility for water quality sampling well beyond its mandated duties</p>
11	Strong linkages between government, academia, NGOs, and communities can lead to more effective identification of key problems, and their subsequent solutions.	<p>Case study: Sungai Salang—river was polluted due to sewage—through the project liaison to higher levels was achieved, that led to linkage with university researchers—recommended inoculation of plankton into river which reduced the problem</p> <p>Case Study: Kampung Payar—their 'house reef' was littered with debris, through the project they were taught the importance of maintaining reef, avoiding anchor damage etc.; reef was cleaned up and now much improved—this resulted in change of mindset- community wants to extend program to other areas, introduce coral transplanting, etc.</p>
12	Successful project actions can serve as models to be replicated or expanded by other stakeholders, at other sites, for other beneficial purposes.	<p>LEK was replicated by DMPM at 24 other sites (28 in system)—can be used for zoning etc.</p> <p>MPMIS is being used for e-permits, etc. has become all-purpose for various administrative functions as well as marine park management</p> <p>Ecoteer has set up a "CCC" on Perhentian—working at village at level; in 2009-2010 ReefCheck also followed project model and began work at Perhentian –this was funded by UNDP SGP- for teaching dive and snorkel skills and awareness</p> <p>Coral resilience studied at non-project sites</p>
13	Improvements to physical infrastructure alone cannot solve environmental problems. In order to achieve the desired outcome, such improvements need to be supported with adequate community preparation, technical knowledge and financing for operation and maintenance.	Funding was secured for construction of a new wastewater treatment plan on Redang Island to service several resorts. Until now, the plant has not been connected to the resorts, due to a lack of qualified personnel to operate the facility.
14	Given the important role of the EPU in budget approval, it is critical that DMPM undertake purposeful coordination with the EPU; proposals need to be well thought-out and presented	
15	The uniform application of a 2 nautical mile restricted no fishing zone is a 'one size fits all' approach that may not be workable in all situations. A more	Despite improved awareness among community members, small-scale violations of the 2nm fishing restriction were reported to be frequent.

No.	Finding/Lesson Learned	Specific Case or Example Leading to Lesson
	flexible and tailored zonation system within the marine parks may generate stronger community support, and ultimately lead to improved conservation results.	
16	While GEF is typically intimately engaged in evaluation and giving feedback during the project preparation and formulation stage (e.g., STAP review, CEO endorsement process, etc.), it seems to gravitate more towards a "laissez-faire" management style during implementation. Greater involvement by GEF at critical points during implementation could have helped to avoid or minimize some of the design problems that affected the project.	Complex project outcomes, poorly framed indicators, and other weaknesses in the project framework were not corrected and were allowed to carry through to later stages of the project implementation.
17	Establishing a clear legal basis for tourism concerns to operate is of vital importance, and is intimately linked to the preservation of the environmental integrity of small island ecosystems, including preservation of marine biodiversity. Two of the important legal elements are: (i) implementing tenurial arrangements (either ownership or long term leases) that would enable and encourage operators to make the long-term investments in infrastructure improvements (e.g., solid waste disposal and sewage treatment) needed to ensure that environmental quality is preserved; and (ii) making sure that all resort operators are in compliance with prevailing EIA requirements, and have thus been given legal clearance (in the form of a Certificate of Fitness) to operate.	Five resorts on Redang Island failed to connect to a newly-constructed wastewater treatment plant. No qualified technician has been hired to run the plant. This may be due in part to operators' reluctance to make a long-term commitment and investment to operating the infrastructure. Ambiguous land tenure arrangements also complicate the enforcement of EIA requirements.

2. Recommendations

Based largely on the lessons enumerated in the preceding section, recommendations for further action have been identified. In Table K-2, below, the recommendations are identified according to their relevance to the specific project outcomes that are defined in the project framework. These are:

1. Planning (including information/database and institutional arrangements);
2. Policy;
3. Communities (including livelihood, stakeholder participation, etc.);
4. Tourism;
5. Enforcement (fisheries and environmental);
6. Awareness (of biodiversity importance); and
7. Advocacy (including legal).

Because the recommendations are quite numerous (totaling 29), an effort has been made to identify the ones that are highest priority, and most appropriate for implementation through the DMPM. Therefore the top seven (7) recommendations are indicated accordingly in the Table. However, it should be noted that this prioritization is quite subjective—in fact the evaluation consultants believe that all the recommendations, whether taken individually or collectively, can contribute to enhancing the sustainability and replicability of the project outcomes, and can help to improve the implementation of similar initiatives in the future.

Table K-2. Recommendations

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
1	Conduct advocacy for passage of a Marine Parks Act.		◆					◆	✓
2	Strengthen awareness-raising on the importance of MPAs and DMPM efforts at State and District Action Council monthly meetings, especially relating to awareness of importance of MPA management for the economic sustainability of small marine park islands.						◆		✓
3	Marine Parks is still a new department, therefore staff are still in need of further training and experience; enhance technical knowledge of staff at all levels, through training, academic coursework and mentorship. This should include capacity-building in basic marine biology and ecology, protected area management, environmental impact assessment, enforcement, and related disciplines.	◆					◆		✓
4	Review MPA Management Plans to ensure adequate technical acceptability. Through further community consultation, finalize Plans and pursue their adoption to give a legal basis for enforcing the conditions of the Plans. Replicate plans for other MPs.	◆					◆		✓
5	To overcome divisions associated with sector-based management, identify and strengthen mechanisms to facilitate more effective coordination between agencies responsible for oversight of land-based and marine-based activities	◆	◆					◆	✓

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
	(e.g., through the Cabinet Committee for National Physical Planning). Alternatively, explore the establishment of integrated State parks that include management of both terrestrial and marine components.								
6	Strengthen sustainable financing for marine park operations by (i) developing an action plan based on the DMPM business plan that is time bound with a prioritized road map, (ii) exploring linkages with relevant GoM-UNDP initiatives such as project for Payment for Ecosystem Services (PES), Biodiversity Finance Assessment and international initiatives such as The Economics of Ecosystems and Biodiversity (TEEB) studies, (iii) exploring the feasibility of additional mechanisms including global trends and practices such as voluntary tourist contribution systems, tourism tax on rooms, carefully designed and monitored volunteer tourism, etc., (iv) discussing the potential for benefit sharing with local communities/local authorities (e.g. funds from voluntary contributions to be channeled to community development and capacity building) and (v) considering development of a full cost assessment of financing needs that are linked to conservation objectives and strategies to fulfill the costs.	◆		◆	◆				✓
7	The SSCs should be maintained. The prevailing proposal is that the project SSCs will be converted to State Steering Committees for Marine Park Management	◆							✓
8	Proposal for Ministry of Tourism to incorporate environmental sustainability perspectives in their mission, policy and objectives in view of the increasing				◆			◆	

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
	tourist demand to natural areas and to maintain Malaysia's competitiveness as a tourism attraction. The proposal includes the adoption of KPIs to ensure achievement of environmental targets (e.g., a defined number of resorts annually are accredited through an eco-rating system etc.)								
9	Through a consortium of agencies (Ministry of Health, Tourism, NRE/DMPM, State government agencies), develop action plan/strategy to utilize water quality monitoring information to guarantee that acceptable water quality standards are applied/enforced, ensuring public health and safety, and maintenance of environmental/ ecological quality in MPs.	◆	◆			◆			
10	Implement measures to address inefficiencies associated with frequent rotation of staff of relevant agencies, committee members of NSC, SSC, etc.	◆	◆						
11	DMPM share data on MPMIS with relevant stakeholders including research institutions, NGOs through signing MoUs in order for them to support DMPM programs and advocacy.	◆							
12	DMPM share project experiences (e.g. through brochures, publications, videos or dialogues) with relevant agencies (e.g. Ministry of Rural and Regional Development, Ministry of Tourism) and potential partners including private stakeholders, NGOs, academic institutions to share the impact of community engagement in natural resource management, particularly through direct incentives that enhance their capacity and livelihood options and identify ways to	◆	◆	◆					

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
	work together more closely in the future particularly in terms of capacity building, tourism and research initiatives.								
13	For future projects, GoM and UNDP should cooperate on streamlining consultant procurement procedures, and develop SOP to address non-performance of consultants.	◆							
14	DMPM convene workshop (with NGOs and academic partners) to identify research priorities—due to finite research budget, it is important that funds are applied to address the most pressing research needs and to determine how research results will be used to support improved MP management.	◆							
15	Support the creation of a National Biodiversity Centre	◆					◆	◆	
16	Develop an action plan and initiate steps to ensure compliance by existing locally owned resorts (in terms of obtaining valid business operating licenses, Certificates of Fitness, conversion of agriculture titled lands to building/industrial lands) to enhance the responsibility and ownership of resort operators towards improving waste management and adopting green practices.							◆	
17	Document the benefits of establishing CCCs and where appropriate, replicate their establishment.			◆					
18	Enhance collaboration with relevant research institutions, associations and			◆	◆				

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
	NGOs particularly to lead advocacy and advance conservation agenda within the tourism sector.								
19	Ensure that sections of the 2 nd National Physical Plan are carried forward into local plans, with sufficient monitoring and enforcement with respect to development on the ground.	◆							
20	Actively provide inputs to key processes such as the on-going/up-coming National Ecotourism Plan and National Biodiversity Policy reviews making use of information generated through the Project.		◆		◆		◆		
21	As a tool to promote greater awareness of the importance of marine biodiversity, conduct a comprehensive economic valuation study to assess the value of coral reefs and other coastal ecosystems, to the Malaysian economy in terms of fisheries production, tourism potential, shoreline protection and other values						◆		
22	To facilitate vertical coordination, implement mechanisms for periodic exchange between National, State, and local level committees (e.g., call special or annual meetings of NSC where State and Community representatives invited to present issues).	◆		◆					
23	In coordination with academia, DMPM, and MoSTI, to study and solve problems of marine park island management in an integrated, holistic way, advocate development of university curriculum /program for small island ecosystems; the			◆			◆		

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
	marine parks would make ideal study sites for such a program								
24	In response to desires voiced by local communities, consider changes to the 2 nautical mile no-fishing zone, to allow controlled fishing within designated areas. Initiate dialogue with affected communities and identify research priorities to explore the feasibility of this option and then to develop appropriate guidelines.		◆	◆		◆			
25	DMPM should be maintained within NRE. Reabsorption of the Department into Fisheries Department would represent a conflict between KPIs for conservation (supported by NRE) versus those for production (supported by Ag/Fisheries)		◆					◆	
26	Undertake a review of outdated regulations and legislation, with the objective of updating and harmonizing outdated or conflicting aspects. This should highlight environmental sustainability, user fees, fines and sanctions, etc.		◆					◆	
27	The NSC should be maintained, and meet at least once/yr. The platform for continuation of the NSC could be through the steering committee for next Malaysia plan, or National Advisory Council for Marine Parks (meet 2x / yr)	◆							
28	Promotion should be strengthened for CSR activities in support of environmental initiatives and marine conservation (e.g.-National Electric Board installed solar panels in P. Tinggi (hybrid diesel/PV for villages)			◆					

No.	Recommendation	Relevance of Recommendation to Project Outcome							Highest Priority (✓)
			2. Policy		4. Tourism	5. Enforcement (fisheries and environmental)	6. Awareness (of biodiversity importance)	7. Advocacy (including legal)	
29	In cooperation with DMPM and academia, MoTOUR should undertake tourist pre-arrival and post-departure surveys to ascertain whether visitors' awareness of marine conservation issues increased as a result of visiting marine parks	◆			◆				
30	Underlying threats and root causes of problems should be identified early on in the project, so that adaptive measures could be undertaken improve project effectiveness (e.g., addressing land tenure issues to facilitate greater engagement among tourism operators)			◆	◆				

Annex L: Case Studies

No.	Story	Proposed Resources / Photos needed	Impacts
Case study 1	After the setting up of CCC, the first step was to clean up a house reef in Tioman. Community leaders were brought to Payar Marine Park to see the diversity of marine life. They were inspired and started actions to remove rubble and rubbish around their house reef. The reef has now been rehabilitated and the community members are able to bring tourists to swim in the area for recreational purposes	<ul style="list-style-type: none"> •Photo of house reef •Picture of tourists swimming in the area? •Picture of the community leaders who were involved in the rehabilitated area 	<ul style="list-style-type: none"> - Community motivated to be involved in rehabilitation works - Community realizing and demonstrating that degraded areas can be rehabilitated
Case Study 2	Through the project's efforts, the communities learned to take ownership of marine resource management. They recognize reefs and natural resources as their heritage and see the link and benefits to their businesses. For many years, these messages were only reflected and confined to awareness raising posters. but now the community members themselves are advocating the need for conservation of the reefs (especially in Tioman).	<ul style="list-style-type: none"> •Picture of poster – marine resources are our heritage •Replaced by community faces and voices 	<ul style="list-style-type: none"> - Communities' awareness level heightened. - Communities take ownership of natural resources management
Case Study 3	The project's programmes such as Snorkel guide etc enhanced tourist experience and value, community empowered to ensure safety procedures are followed and also reef etiquette are enforced during tourists' snorkeling/ diving trips. Previously only the boatmen (without guides) would bring tourists out to sea without any explanation or background for tourists	<ul style="list-style-type: none"> •Picture of tourists going out on boat with guide 	<ul style="list-style-type: none"> - Communities realize the link between conservation and benefits for their businesses.
Case Study 4	DMPM staff community liaison staff perceived that before the project, there was around 30% engagement with the community, after the project he is confident that there is about 80% engagement with the community. Community considers DMPM staff as friends as opposed to previously when they were not welcomed	<ul style="list-style-type: none"> •Photo of En. Mat Ulum, formerly DMPM staff at Tioman •Previously community consider DMPM staff as foe, now as friends – Photo of Redang Village head or Pak Akhir in Tioman or Tok Mok from Pulau Sibut/Tinggi 	<ul style="list-style-type: none"> - Enhanced relationship between DMPM and the community
Case Study 5	English courses and certificates gave the local communities the opportunities to apply for jobs at the local resorts. One member who went on the English course was hired for a National Geographic project. Local communities are more confident in speaking English as they benefitted from the exposures they	<ul style="list-style-type: none"> •Photos of community that has been successful in getting jobs at resorts/National Geography 	<ul style="list-style-type: none"> - Equipping the local community for greater alternative livelihood opportunities

No.	Story	Proposed Resources / Photos needed	Impacts
	received through the English courses		
Case Study 6	Communities were taught to fix and maintain boat engines. Before the project, the community in Redang had to send their boats mainland and couldn't use their boats for transporting tourists for two weeks	•Photos of community involved in training (Redang stakeholder consultation meeting)	<ul style="list-style-type: none"> - Capacity of the community raised in boat maintenance and repair - This helps to minimise non-productive periods and saving maintenance costs
Case Study 7	Communities were given courses and certificates to recognize them as boatmen. Previously they were ferrying tourists at a lower price as they did not have the necessary official documents	•Photos of community that have been licensed (through project training) to ferry tourists	<ul style="list-style-type: none"> - Raised the professionalism of the community through legal means of conducting businesses. - Safety measures and standard operating measures in place for bringing tourists to sea
Case Study 8	Replication case in Pulau Perhentian where the local communities have started their cooperatives and produced products that are sold to the resorts. At the moment, they are unable to meet the demand.	•Photo or newspaper cutting of Pulau Perhentian model	<ul style="list-style-type: none"> - Results from Tioman and Redang motivated change in other communities. - Provided alternative livelihood options