



UNITED NATIONS DEVELOPMENT PROGRAMME

Conservation and Sustainable Use of Gulf of Mannar's Biosphere Reserve's Coastal Biodiversity

ATLAS ID 13013 PIMS 0568



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Draft Report of the Terminal Evaluation Mission

May 2013

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Acknowledgements

This is not really the work of the Terminal Evaluation Team but that of all the staff and people connected with the Gulf of Mannar Project who gave freely of their time and ideas to make the evaluation process a success. There are far too many people to mention by name – and hopefully everyone who contributed is included in the lists of names annexed to this report – but special mention must be made of the Project's Programme Specialist, Deepak Samuel, who gave unstintingly of his time in accompanying us during the field mission, and who provided, or coordinated the provision of, much of the information that we required, particularly after the end of the mission. In addition, UNDP's Programme Analyst, Ms. Lianchawii Chhakchhuak, also accompanied us for part of the mission. Between them, they answered every question we asked and discussed the points we took every opportunity to raise and were responsible for either organising or coordinating all of the in-country logistics. Thanks to them the whole evaluation process ran like clockwork.

Following completion of the Draft Report on 4th April 2013, review comments were received from the UNDP-CO, and the State Government on 4th May 2013. These comments have either been included into the revised text where these related to factual inaccuracies in the draft, or have been reproduced in full and unedited as footnotes to the appropriate text or in annexes to ensure a fair hearing to all parties. The Terminal Evaluation Team has made responses to some of the comments. We thank the reviewers sincerely for their efforts and insights which have undoubtedly improved this final report.

The views expressed in this report are intended to offer an overview of, and some of the lessons learned from, the Gulf of Mannar Project at its conclusion. We have tried to balance our thoughts and to offer fair perspectives of what was observed and learned from people far more knowledgeable about the Project and its context than we will ever be. Furthermore, in a complex project where there are many parties, and where some views are counterposed, it is impossible to find a form of words that would be acceptable to all in all cases. Nonetheless, we offer our sincere apologies in advance if anyone should take anything written to be anything other than constructive criticism.

PE would like to express his sincere gratitude to Mohamad Kasim for his perceptive thoughts and insights, extensive technical and cultural local knowledge, and without whose linguistic skills none of this would have been possible. He represents one of the most capable national consultants that I have had the privilege to work with in any country on any evaluation and I thank him for his considerable input, both verbal and written. Furthermore, he worked long and hard beyond his ToR and always with a ready smile to prioritise my welfare, and his kindness and friendship have been much appreciated.

And finally, one of the delights of this sort of work remains that of visiting new and extremely welcoming countries and going home again having made new friends, seen new things, and witnessed with great admiration the dedication and enthusiasm that so many people bring to their work in conserving the important places of the world. I would like to thank them and wish them every success in their continuing endeavours.

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14th May 2013

ACRONYMS AND TERMS

Currency of India is the Indian Rupee (IR). At the time of the final evaluation, US\$ 1 = IRs 54.0.

BRA	Biosphere Reserve Authority
CEO	Chief Executive Officer
DLCC	District Level Coordination Committee
FD	Forest Department
FD-WW	Forest Department Wildlife Warden
FSD	Fisheries Department
GEF	Global Environment Facility
GoM	Gulf of Mannar
GoMBR	Gulf of Mannar Biosphere Reserve
GoMBRT	Gulf of Mannar Biosphere Reserve Trust
GoTN	Government of Tamil Nadu (State Government)
LTFM	Long Term Funding Mechanism
M&E	Monitoring and Evaluation
MNP	Marine National Park
MSSRF	MS Swaminathan Research Foundation
MTE	Mid-term Evaluation
NGO	Non-governmental Organisation
PDF-B	Project Development Facility – Block B
PIR	Project Implementation Report
PSC	Project Steering Committee
ROti	Review of Outcomes to Impacts
SLCC	State Level Coordination Committee
SDMRI	Suganthi Devadason Marine Research Institute
STAP	Scientific and Technical Advisory Panel
TE	Terminal Evaluation
TET	Terminal Evaluation Team
TNPCB	Tamil Nadu Pollution Control Board
ToR	Terms of Reference
TPR	Tri-partite Review
UNDAF	UN Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme Country Office
US\$	United States Dollar
VMCEDC	Village Marine Conservation and Eco-development Committee

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EXECUTIVE SUMMARY

Project Summary Table				
Project Title:	Conservation and Sustainable Use of Gulf of Mannar's Biosphere Reserve's Coastal Biodiversity			
GEF Project ID:	13013		<i>at endorsement (US\$)</i>	<i>at completion (US\$)</i>
UNDP Project ID:	IND/99/G31	GEF financing:	7,650,000	7,650,000
Country:	India	IA/EA own:	1,000,000	1,000,000
Region:	Asia-Pacific	Government:	16,965,000	16,965,000
Focal Area:	Biodiversity	Other:	19,205,000	--
Operational Programme:	GEF-3: OP-2 (OP 2, Coastal, Marine and Freshwater Ecosystems) GEF 4: BD-1 (Catalysing Sustainability of PAs)	Total co-financing:	36,170,000	16,965,000
Executing Agency:	Department of Environment and Forests, Government of Tamil Nadu	Total Project Cost:	44,820,000	25,615,000
Other Partners involved:	Gulf of Mannar Biosphere Reserve Trust, local NGOs	Prodoc Signature (date project began):	7 th March 2002	
		(Operational) Closing Date:	Proposed: 31 st Jan. 2010	Actual: 31 st Dec 2012

PROJECT DESCRIPTION

The Gulf of Mannar off the south-eastern coast of Tamil Nadu in India is an extensive embayment that is famous as one of India's richest coastal seas. A chain of four groups of low coral sand islands lies parallel to the main coast around which the main habitats of coral reefs, sea grass meadows, mangroves stands, and benthic sediments are found with their diverse associated communities of algae, marine invertebrates and fish, and important populations of globally endangered species of sea turtles and dugong. The islands are important roosting and nesting sites for numerous species of sea and shore-birds and for turtles. The deeper seabed and open waters of the Gulf support rich populations of benthic invertebrates and fishes, demersal and pelagic fishes, dolphins and whales. The Project, consistent with the GEF Strategic Priority BD-1 (Catalyzing sustainability of protected areas), was designed to address the problems of habitat destruction; over-harvesting of marine resources; and potential, localized land-based marine pollution from a low number of civic point-sources. Over ten years (2002-2012) the Project built the basis for increased coordination of management activities by the appropriate authorities, increased the protection of the marine resources, and empowered local fishing communities to practice sustainable, biodiversity-friendly natural resource use and to pursue diversified livelihoods.

Evaluation Rating Table		
Criterion	Comments	Rating
Monitoring and Evaluation		
Overall quality of M&E	The design period is so long ago that project M&E was given little serious attention, hence it is not possible to evaluate it against current standards. M&E implementation has been generally of a high standard, with good progress monitoring and strong internal activity monitoring, but with limited impact. Unfortunately M&E does not appear to have been fed back into any adaptive management.	Moderately Satisfactory
M&E design at project start up		Not applicable
M&E Plan Implementation		Moderately Satisfactory

IA & EA Execution:		
Overall Quality of Project Implementation/Execution	The Project has had mixed management with confused and generally poor oversight; and a risk-averse strategy has skewed the Project away from taking much-needed innovative steps on institutional and policy reform, plumping instead for more easily implemented activities on protection and socio-economic development.	Moderately Satisfactory
Implementing Agency Execution	Management has been mixed. Implementation by the management team has produced impressive results on the ground where it has been enabled to work, but the State Government has manifestly altered the Project's emphasis to fit its own ideas of what is needed and consequently results elsewhere have been underwhelming.	Moderately Satisfactory
Executing Agency Execution	UNDP-CO has provided an adequate level of supervision but has not been assiduous enough in guarding GEF's interests, providing insufficient oversight intervention on the really serious issues that have arisen during the Project.	Moderately Satisfactory
Outcomes		
Overall Quality of Project Outcomes	Overall quality of products is very good, but the main outcome, that of developing an apex decision-making body for the Biosphere Reserve with its own independent long-term funding mechanism, has not been achieved.	Moderately Satisfactory
Relevance	The Project intervenes in an area of huge importance globally for marine biodiversity, is congruent with GEF and national priorities, and remains pertinent in the light of the current levels of threat.	Relevant
Effectiveness	A review of outcomes to impacts (ROtI) indicates that the overall likelihood of impacts being achieved is one case each of Highly Likely, Likely, Moderately Likely, and two of Unlikely, hence the Project has achieved most of its major objectives, and yielded some excellent products, but is not expected to yield some of its global environment benefits.	Moderately Satisfactory
Cost-effectiveness (Efficiency)	The TET has insufficient reliable financial data on which to assess cost-effectiveness, but notes concerns over high project management costs raised by others, and notes some small concerns that certain organisations were favoured despite inflated costs.	Not assessed
Sustainability:		
Overall likelihood of risks to Sustainability	Each risk dimension of sustainability is deemed to be critical, the overall rating for sustainability cannot be higher than the rating of the dimension with lowest rating.	Moderately Unlikely
Financial resources	Although the long-term funding mechanism has not been capitalised, continued funding for some of the Trust's activities has been authorised by the State Government; and the micro-finance system is now large enough and profitable enough to be self-sustaining.	Likely

Socio-economic	Solid – beneficiaries show increased awareness and changed behaviours. All members of self-help groups indicated that the availability of low-interest micro-credit had boosted their family incomes and as a result they had hopes that they could provide a better education for their children and enable them to leave fishing as a profession.	Likely
Institutional framework and governance	The GoMBR Trust enjoys high level support from the State Government, but there are serious weaknesses inherent in its functioning that raise questions about its relevance and its ability to be delivering its mandate with any degree of effectiveness. A more centralised role with greater powers of oversight may help – but these still need agreement.	Moderately Likely
Environmental	Small risks evident from coral bleaching though elevated sea temperatures in 2010 only.	Likely
Impact:		
Environmental Status Improvement	Live coral cover increasing; Populations of globally-threatened mammals unknown.	Significant
Environmental Stress Reduction	Complete cessation of coral-mining within Biosphere Reserve, enforcement increased through new boats to increase anti-poaching patrols and employment of anti-poaching watchers, awareness and educational activities organised for 77,000 fisherfolk through establishment of 248 Village Marine Conservation and Eco-development Councils, 2,341 self-help groups with 34,699 members (>76.7% women) given access to low-interest micro-credit to provide subsidiary livelihoods, additional tuition provided to 2,500 students in 26 schools and vocational training provided for 1,900 youths to help provide employment outside of the fishing industry.	Significant
Progress towards stress/status change	Generally good – coral mining has ceased, decreases evident in number of poaching incidents, increased awareness about conservation issues evident amongst fishing community, improvements in protected area management capacity and economic benefits for local people through financial incentives and introduction of innovative livelihoods.	Significant
Overall Project Results		Moderately Satisfactory

KEY SUCCESSES

Establishment of the Gulf of Mannar Biosphere Reserve Trust (something of a milestone achievement) as a cross-sectoral coordination body for management activities within the Reserve and to facilitate awareness-raising and livelihood development among the fisher communities living within the Reserve; six coordination committees established and operated at State and District levels under the auspices of the Trust; complete cessation of coral-mining within the Reserve; complete ban on trawling between the coast and the 21 islands; seasonal ban on collection of seaweed; no further issuance of registrations for bottom trawlers in Gulf of Mannar since 2010; increase in live coral cover of 2.2% between 2003-12; increase in total fish landings of 7.83% between 2008/9 and 2011/12 with constant effort; Village Marine Conservation and Eco-development Councils established in all 248 villages within the coastal zone of the Reserve through which awareness and educational activities have been organised for 77,000 fisherfolk; a total of 2,341 self-help groups have been formed comprising 34,699 members (>76.7% women) and given access to low-interest micro-credit through a corpus fund capitalised with IRs. 77.5 million (US\$ 1.435 million) but now standing at IRs 99.5 million (US\$ 1.843 million); more than 1,900 youths from the fishing communities have

undergone short vocational trainings on 22 courses to help provide employment outside of the fishing industry; additional tuition has been provided to 2,500 students in 26 schools to help with critical examinations; three speedboats and three traditional craft purchased and deployed for anti-poaching patrol work; engagement of 33 Anti-poaching Watchers for deployment on islands to improve surveillance capability; excellent interpretative centre constructed at Kunthukal; management plan for the Reserve produced; and baseline data on Reserve expanded through targeted research studies and monitoring of coral reefs.

KEY PROBLEM AREAS

Co-financing not forthcoming in the forms committed to; concept of establishing the Trust as an apex decision-making body not fulfilled; current embodiment of the Trust lacks teeth to play an effective conservation role and has highly restricted mandate; too little integration of management roles, e.g. a Trust Director, a Biosphere Director and a Marine National Park Director instead of a single role; no long-term financing mechanism capitalised to ensure independent funding of Trust's future activities; coordination committees generally meet too infrequently to be effective; frequent turnover of Trust Director and other Government staff resulting in lack of continuity in vision and leadership; no buoys deployed to mark boundary of core zone; and management plan weak on prescriptions and not being used as a framework for management of the Reserve.

The Terminal Evaluation (TE) of the Project was conducted over a period of 25 days between 6th March and 5th April 2013 by a team comprising one international and one national consultants. It was carried out according to schedule about three months after the Project's closure. The Evaluation's ToR is given in Annex I, its itinerary in Annex II and the list of people interviewed in Annex III. A list of indicators, their end of Project achievement level, together with performance rating is given in Annex IV. After receipt of comments on 4th May 2013, which have either been added as footnotes to the main text or included in annexes, the report was finalised on 14th May 2013.

KEY ISSUES

While the State Government has implemented this Project, it has manifestly altered its emphasis to fit its own ideas of what is needed. This may have come about because of insufficient consultation with the Government during the original design and perhaps not enough credence was given to its views at that stage, but the Project Document that the State Government signed up to is relatively unambiguous in its intentions to establish a singular coordinating structure for the Biosphere Reserve along with a sustainable funding mechanism to enable it to undertake conservation activities; to combine biodiversity protection with conservation management to provide sustainable resource use; and livelihood development. Yet from the outset, a decision was taken to emphasise the livelihood and protection aspects at the expense of the higher level policy and institutional changes that were necessary and expected, thereby unbalancing the Project's overall strategy. The results have been impressive where the Project has been enabled to work, yet underwhelming elsewhere. Innovation is one of GEF's key approaches – testing new ideas to see if they work or to determining how they may be used in new contexts is central to the design of many projects - but in this case, the State Government's remarkably conservative approach to the Project has resulted in a host of missed opportunities – singular authority, long term financing mechanism, eco-tourism, enhancement of marine resources, species recovery plans.

Although the GoMBR Trust has been formed, it is not the apex decision-making body envisaged by the Project's designers and UNDP-GEF. The mechanism designed for its independent long-term financing has not been capitalised, and although the State Government has agreed to fund the Trust beyond the Project's end, it lacks teeth as a conservation body and its scope has been reduced to little more than awareness-raising and research functions. While the complicated series of coordination committees are also still operative, there is little evidence of their effectiveness since they meet less frequently than programmed, and the State Government's unwillingness to streamline the system is exemplified by a decision to retain a Director of the Trust itself, a Director of the Biosphere Reserve, and a Director of the Marine National Park. This is not modern conservation management in action. Higher level policy reforms on sectors impacting the Reserve have been restricted to a ban on trawling between the coast and the 21 islands of the Reserve; a ban on the registration of new

trawlers in all ports in the State; and a seasonal ban on the collection of seaweed from around the islands – but all of which have had beneficial effects. The Management Plan developed by the Trust is rich in description but poor on prescription and again there is no evidence that it is being used as a basis for the day-to-day management of the Reserve; rather it appears to be document that is pulled off the shelf to show people or for reference purposes. On the positive side, however, the Project has done an outstanding job on those aspects it was redirected towards. It has formed a Village Marine Conservation and Eco-development Council in each of the 248 villages lying within the 10km-wide coastal belt of the Reserve and has introduced micro-finance facilities to 2,341 self-help groups benefitting 34,699 members. It has taken a long-term strategy of reducing the fishing pressure in the Reserve by improving the educational prospects of fisher family children through a number of means to encourage them to take up different and more economically viable professions. Awareness-raising activities amongst villagers has led to increased understanding and acceptance of the need for conservation of marine resources, and together with improvements in enforcement activities through the deployment of new boats and anti-poaching watchers, this has resulted in a decrease in the extent of illegal fishing activities in the Reserve. There is some indication that the marine environment is responding – the coverage of live coral on the reefs has shown a small increase. With the notable exception of seaweed cultivation, sadly, the Project has not taken any steps to develop marine resources for sustainable use by fishermen to help offset their lost opportunities from the increased restrictions, and eco-tourism is notable by its absence, but coral habitat has been extended by the development of artificial reefs within the Marine National Park, and valuable research has been completed on updating the Reserve's baseline. The evaluation of achievements against indicators (provided in Annex IV) shows that of the 26 indicators that it is possible to evaluate against (one is impossible), 16 (61.5%) show successful achievement at the end of the Project and five (19%) show achievement nearly successful – a good achievement.

Recommendations and Lessons Learned are listed on pages 54-55.

APPROACH AND METHODOLOGY

1. The *Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects* issued by the Evaluation Office in 2012 states that:

“Evaluations for UNDP-supported GEF-financed projects have the following complementary purposes:

- *To promote accountability and transparency, and to assess and disclose the extent of project accomplishments.*
- *To synthesize lessons that can help to improve the selection, design and implementation of future GEF financed UNDP activities.*
- *To provide feedback on issues that are recurrent across the UNDP portfolio and need attention, and on improvements regarding previously identified issues.*
- *To contribute to the overall assessment of results in achieving GEF strategic objectives aimed at global environmental benefit.*
- *To gauge the extent of project convergence with other UN and UNDP priorities, including harmonization with other UN Development Assistance Framework (UNDAF) and UNDP Country Programme Action Plan (CPAP) outcomes and outputs.”*

With this in mind, this Terminal Evaluation (TE), carried out by an independent team of consultants, was initiated by UNDP India as the GEF Implementation Agency for the *Conservation and Sustainable Use of Gulf of Mannar’s Biosphere Reserve’s Coastal Biodiversity* Project (known to all throughout its implementation as the Gulf of Mannar Project) to measure the effectiveness and efficiency of Project activities in relation to the stated objectives, and to collate lessons learned.

2. The TE was conducted over a period of 25 days between 6th March and 5th April 2013 by a team comprising one international and one national consultant. It was carried out according to schedule about three months after the Project’s closure. The approach was determined by the terms of reference ([Annex I](#)) which were closely followed, via the itinerary detailed in [Annex II](#). Full details of the objectives of the TE can be found in the TOR, but the evaluation has concentrated on assessing the concept and design of the Project; its implementation in terms of quality and timeliness of inputs, financial planning, and monitoring and evaluation; the efficiency and effectiveness of activities carried out and the objectives and outcomes achieved, as well as the likely sustainability of its results, and the involvement of stakeholders. The report was finalised on 14th May 2013 after receipt of comments from the UNDP-CO and the State Government on 4th May. The text has been revised to correct factual inaccuracies in the draft or to include additional information, while other comments have been reproduced in full and unedited as footnotes to the appropriate text or in annexes to ensure a fair hearing to all parties. The Terminal Evaluation Team (TET) has made responses to some of these comments. Comments were also received from the Suganthi Devadason Marine Research Institute (SDMRI), but unfortunately the language used was so intemperate, the accusations made so libellous, the issues discussed so misconstrued, and the paranoia displayed so rife, that these comments have not been reproduced in this report¹ and have largely been ignored. Should any reader wish to view them, they can do so by contacting the UNDP-CO directly.

3. The evaluation was conducted through the following participatory approach to provide it with sufficient evidence upon which to base conclusions:

- extensive face-to-face and Skype/telephone interviews with the project management and technical support staff, including some members of the project Steering Committee; group interviews with local stakeholders, particularly the beneficiaries, mainly in the villages;
- face-to-face interviews with relevant development institutions and individuals;

¹ The first time the Lead Evaluator has ever had to do this in 23 GEF evaluations.

- a thorough review of project documents and other relevant texts, including the Project Document, revised logframe, Mid-term Evaluation (MTE), and monitoring reports, such as progress and financial reports prepared for UNDP and annual Project Implementation Reviews (PIR) for GEF, minutes of Project Board meetings, technical reports and other activity reports, relevant correspondence, and other project-related material produced by the project staff or partners; and
- field visits to both Districts – Ramanathapuram and Thuthukudi – that the Project worked in to view its interventions on-the-ground.

4. Interviews were not carried out using a set of interview guidelines which the Lead Evaluator finds too inflexible. Instead, interviews were carried out informally, often focussed on certain key points, thereby allowing the evaluator to pick up on certain issues and draw vital information out from what often starts as a seeming “throw-away” answer to a question. Long experience has proved the efficacy of this method. Preparation is not required by the interviewee and there are no “right” or “wrong” answers. It is people’s experiences, insights, reflections, and suggestions with or on the project that are important. Throughout the evaluation, particular attention was paid to explaining carefully the importance of listening to stakeholders’ views and in reassuring staff and stakeholders that the purpose of the evaluation was not to judge performance in order to apportion credit or blame but to measure the relative success of implementation and to determine learn lessons for the wider GEF context. The confidentiality of all interviews was stressed. Wherever possible, information collected was cross-checked between various sources to ascertain its veracity, but in some cases time limited this. An opportunity was always provided to all interviewees to ask questions of the evaluators. A full list of people interviewed is given in [Annex III](#).

5. Wherever possible the TET has tried to evaluate issues according to the criteria listed in the *UNDP-GEF Monitoring and Evaluation Policy*, namely:

- Relevance – the extent to which the activity is suited to local and national development priorities and organisational policies, including changes over time, as well as the extent to which the project is in line with the GEF Operational Programmes or the strategic priorities under which the project was funded.
- Effectiveness – the extent to which an objective has been achieved or how likely it is to be achieved.
- Efficiency – the extent to which results have been delivered with the least costly resources possible.
- Results – the positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short-to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.
- Sustainability – the likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally as well as financially and socially sustainable.

6. The original logframe in the Project Document has never been properly revised. An attempt was made to do so in 2006, but no changes were endorsed formally. A second attempt was made in 2009 following a recommendation made by the Mid-term Evaluation (MTE), but again this was never adopted by the Project Steering Committee. In the event, since the original logframe would be 12 years old, and it is blighted by not having baseline data nor generally SMART² indicators, the TET and the UNDP-CO agreed to use the unofficial 2009 version as the framework for this evaluation (see paragraph 18 *et seq.*). It comprises five outputs and 27 indicators and has been used throughout as the basis for this evaluation (see [Annex IV](#)), and the TE has evaluated the Project’s performance against

² Specific, Measurable, Attainable, Relevant, Time-bound

these according to the current six-point evaluation criteria provided to it by the GEF. This is reproduced in Table 1 for clarity.

TABLE 1: CRITERIA USED TO EVALUATE THE PROJECT BY THE FINAL EVALUATION TEAM

Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as “good practice”.
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.
Marginally Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.
Marginally Unsatisfactory (MU)	Project is expected to achieve some of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.

7. In addition, other scales have been used to cover sustainability (Table 2), relevance (Relevant/Not Relevant), and impacts (Significant/Minimal/Negligible) although the *Guidance for Conducting Terminal Evaluations of UNDP-supported GEF-financed Projects 2012* does not provide any methodology for the latter. In order to try and overcome some of this deficiency, a Review of Outcomes to Impacts (ROtI) has been included. Although not yet a UNDP requirement, the Lead Evaluator has experience of undertaking this for UNEP-GEF projects and believes it to be a valuable indicator; and the 2012 UNDP publication states that “... *the GEF Evaluation Office is developing new guidance in 2012 that will likely require the introduction of a new section in the results analysis on “progress to impacts” for all full-sized projects*”. The method requires ratings to be made for outcomes achieved by the project and the progress made towards the ‘intermediate states’ at the time of the evaluation. The rating scale is given in Table 3 while Table 4 shows how the two letter ratings for “*achievement of outcomes*” and “*progress towards intermediate states*” translate into ratings for the “*overall likelihood of impact achievement*” on a six-point scale. A rating is given a ‘+’ notation if there is evidence of impacts accruing within the life of the project which moves the double letter rating up one space in the six-point scale.

TABLE 2: SCALE USED TO EVALUATE THE SUSTAINABILITY OF THE PROJECT

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.

TABLE 3: RATING SCALE FOR OUTCOMES AND PROGRESS TOWARDS “INTERMEDIATE STATES”

Outcome Rating	Rating on progress toward Intermediate States
D: The project’s intended outcomes were not delivered	D: No measures taken to move towards intermediate states.
C: The project’s intended outcomes were delivered, but were not designed to feed into a continuing process after project funding.	C: The measures designed to move towards intermediate states have started, but have not produced results.
B: The project’s intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding.	B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended long term impact.
A: The project’s intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.

NOTE: If the outcomes above scored C or D, there is no need to continue forward to score intermediate stages given that achievement of such is then not possible.

TABLE 4: RATING SCALE FOR THE “OVERALL LIKELIHOOD OF IMPACT ACHIEVEMENT”.

Highly Likely	Likely	Moderately Likely	Moderately Unlikely	Unlikely	Highly Unlikely
AA AB BA BB+	BB AC+ BC+	AC BC	AD+ BD+	AD BD C	D

8. The results of the evaluation were conveyed semi-formally at a de-briefing attended by UNDP staff, prior to the Lead Evaluator’s departure from India (see [Annex V](#)). **Lessons learned** have been placed in boxes and cross-referenced with a number hyperlinked to the “*Lessons Learned*” section where further discussion can be found. They are numbered according to the order in which they occur in the “*Lessons Learned*” section, not in the order that they occur in the text.

CONSTRAINTS

9. One of the issues that has produced some problems for the Project also posed constraints on the TE, i.e. the regular transfer of government staff between posts. In many cases, government officials were found to be relatively new in their new jobs and hence had limited knowledge of the Project. While every effort was made by UNDP to track down officials who had held relevant positions during the Project, this effectively was restricted to just those concerned with the Forest Department, and this constrained any evaluation of the Project in a wider context. The other significant constraint has been the inability of the Project or UNDP-CO to provide reliable financial data on the Project. This is discussed in detail in the financial section – see paragraph 39.

PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

BACKGROUND AND DURATION

10. The Project appears to have been conceived initially as an idea emanating from the MS Swaminathan Research Foundation (MSSRF) and subsequently adopted by the Forest Department of Tamil Nadu to build upon the 1989 designation of India’s first marine Biosphere Reserve conserving the Gulf’s 21 coastal islands and their surrounding shallow water mangrove, coral and sea grass habitats. The Project entered the GEF project pipeline on 15th August 1996 and was designed under a PDF-B grant between 5th September 1997 and 6th September 1998. The original Project Brief was approved by GEF Council and simultaneously received CEO approval on 15th October 1999 as a Full-sized Project under Operational Programmes OP2: Coastal, marine & freshwater ecosystems as part of

Strategic Objective Biodiversity #1 of the GEF Business Plan – Catalyzing sustainability of protected areas. Following the PDF-B, there were unaccountable delays, but UNDP supported a pilot project in the Gulf of Mannar area from 2001 to 2003 that contributed US\$1 million of core funds (counted as project co-financing). This pilot worked with two NGOs, MS Swaminathan Research Foundation and Dhan Foundation, to devise, test and develop a number of marine resource-based livelihood options suitable for replication in the subsequent main project. The Mid-term Evaluation states that:

“It is apparent that there were some good results obtained through the pilot project activities. Unfortunately, the results and any remaining assets have not been integrated with or “handed over” to the full project.”

An evaluation of this pilot was undertaken in 2004, but this was not seen or requested by the TET. The final signature on the Project Document was made on 7th March 2002. Project progress was negligible until 2005 when efforts to increase delivery were made, and the Mid-term Evaluation was delayed until April 2008 as a result. The Project was granted a three-year extension from the end of 2009 to 31st December 2012.

PROBLEMS ADDRESSED

11. The Project Document does not contain an explicit problem statement. In its analysis under its “*Threats to Biodiversity*” section it states:

“The primary threats to the globally significant biodiversity of the Reserve are, in order of importance:

- a. habitat destruction;*
- b. over-harvesting of marine resources; and*
- c. potential, localized land-based marine pollution from a low number of civic point-sources.”*

It goes on to indicate that illegal coral mining continues and that “*sea grass beds are harmed by inappropriate bottom trawling practices*” and lists among the reasons a lack of integrated management, insufficient enforcement, lack of public awareness and support for the Reserve, insufficient clarity in demarcation of the protected area boundaries, and a lack of livelihood option. It notes the growing cumulative balance of over-harvesting where the larger mechanized boats catch most of the fish, precluding the smaller, traditional craft from catching their share, in turn forcing traditional craft to employ destructive practices; the lack of effective property regimes for the marine resources; a lack of community management capacity; and inadequate information to drive decisions. It also notes the potential threat from land-based pollution to the Reserve. In short, there was a need to accommodate and manage the competing demands made upon the area’s coastal and marine resources while integrating the needs of the multiple sectoral interests and coordinating the management response necessary to safeguard the long-term health of the ecosystem.

EXPECTED RESULTS

12. The Development Objective is given as:

“Globally significant coastal biodiversity in a multiple-use area will be conserved and sustainably utilized by stakeholders”

and the Immediate Objective, listed as “*Project Purpose*” as:

“Strengthened, statutory Trust/Foundation will ensure that government agencies, private sector, local communities and NGOs all work together in a coordinated way for integrating biodiversity conservation into coastal zone management plans, and take responsibility for their implementation. The FD-WW and local communities will implement a sustainable conservation programme for the Park. The FSD will implement a sustainable fisheries harvest programme successfully in the buffer zone. Inhabitants of buffer zone will apply alternative livelihoods successfully and halt encroachment on protected area resources.”

Since the Project was designed in 1997-98, there is no explicit statement of the expected global environmental benefits being realised by the Project, as there would be in a Project Identification Form which was introduced much later in 2008. However, some ideas can be gleaned of the expected global benefits described in the incremental cost matrix, thus:

- “1. *Global use, non-use, existence, and options values for biodiversity in the Reserve will be secured.*
2. *A strong, participatory management mechanism is established to improve conservation and sustainable use of Reserve biodiversity.*
3. *Enabled communities become active partners in conserving globally significant biodiversity.*
4. *Existing livelihoods are modified. Pressure on biodiversity reduced as people receive tangible benefits from non-destructive livelihood options.*
5. *Increased awareness of biodiversity values translates into greater active support for conservation.”*

and from the indicators which are assessed in [Annex IV](#).

PROJECT PREPARATION

CONCEPT AND DESIGN

13. The Project originated through a desire to consolidate and strengthen the protection initiatives that had been undertaken in the 1980s. In 1986, under the *Wildlife Protection Act (1972)*, the line of 21 small islands near to the northern Gulf coastline, together with the sea area immediately around each (560 km²), had been designated the Gulf of Mannar National Park, India’s first Marine National Park. In 1989, a separate government order was made to establish the Gulf of Mannar Biosphere Reserve over the major portion of the Indian part of the Gulf, covering an area of approximately 10,500 km², encompassing the entire National Park, a wider sea area surrounding it, and including a 10 km-wide strip of the terrestrial coast. In India, biosphere reserve and national park management responsibilities are primarily vested with the state government, and the National Park was placed under the management of the Tamil Nadu Forest Department and the Department’s Wildlife Warden. In August 1998, the Government of Tamil Nadu became the first state in India to initiate the development of an Integrated Coastal Zone Management Plan, by establishing a state-wide Integrated Coastal Management Authority (CMA). Despite this and the State Government’s recognition of the significance of the Reserve, as well as its willingness to develop cross-sectoral mechanisms to successfully manage it, higher funding priorities meant that the Reserve struggled to maintain minimum levels of operation, and the basic management provisions outlined under the 1989 Order establishing the Reserve including “*survey, conservation, protection, eco-restoration, education and awareness*” were not forthcoming, and there was little indication that this baseline scenario would change. Furthermore, it is clear that at the time of the Project’s design, coastal and marine biodiversity conservation was not a critical priority issue for national and sub-national developmental planning. The UNDP-CO considers it to have been “*a bold attempt to conceive a project with a vision and strategy that combined a) improved management effectiveness of the marine Protected Area; b) work with local communities on sustainable livelihoods; and c) evolving a cross-sectoral approach to conservation. This was a shift from the then existing strategy which focused inwards on Protected Areas a decade ago. It was a game changing trail of thinking and had wide resonances across the country, particularly on coastal and marine biodiversity conservation*”.

14. The Project is largely well-designed with an appropriate technical response to the threats encountered; adequate stakeholder engagement; is large in scale covering almost 250 villages; and its requirement for institutional change is challenging yet it does not fall into the trap of so many early GEF projects in being overly-ambitious; and with a budget of US\$ 20.94 million cash and US\$ 5.80 million in-kind is well-funded for what was conceived initially as a seven-year project. However, it is somewhat complex and neither the Project Document nor the logframe convey the overall implementation strategy particularly clearly – there is a tacit understanding that those who will manage the implementation will prove as knowledgeable as the designers and hence some of the

details necessary have not been fully spelt out, in particular the development of the legal and policy frameworks necessary to effect institutional reform and to strengthen the management arrangements are not clearly articulated. The Project Document also assumes that development of the Trust as the apex decision-making body would occur first and the remainder of the activities would follow, allowing all the necessary changes to integrate all of the required management agencies and their activities. This has not happened.

Design Logic

15. The central logic of the Project comprises the creation of a statutory body to direct and coordinate the multiplicity of government line departments, boards, committees, non-governmental and community-based organisations, and research institutes concerned with undertaking economic, scientific, management, and enforcement activities within the Gulf of Mannar. Within this principle, the remaining components were designed to provide actions to improve biodiversity protection, develop sustainable marine resource use, and develop alternative (or supplementary) livelihoods for those currently connected to fishing (in the broadest sense). These would include a number of innovative interventions to test and demonstrate ideas such as co-management and community participation in natural resource management and rural development and marine biosphere reserve management. This logic is sound, reasonably robust, and sufficiently open to interpretation as to allow changes through adaptive management as situations change (over a seven year project) and new opportunities present themselves. However, neither the strategy nor the logframe are completely clear and the latter contains a good deal of overlap, for example why are Components B “*Strengthening National Park operations*” and C “*Strengthening National Park Infrastructure*” not combined into something like “*Strengthening the functions of the Core Zone*”?

16. The rationale is well described. The situation analysis in the Project Document highlighted the global importance of the biological diversity of the Gulf of Mannar through a range of facts such as 17 species of mangrove occur within the Biosphere Reserve, as well as all six genera and 11 species of sea grass recorded in India; 147 species of marine algae; 108 species of sponges; 91 species of coral; 100 species of echinoderms; 260 species of molluscs; 79 species of crustaceans; and 450 species of fishes; plus dugong (*Dugong dugong*) and five species of marine turtles. Yet perhaps the most amazing fact is given, thus:

“The Park’s Krusadai Island exemplifies the biological significance of the Gulf. ... Representatives of every animal phylum known (except amphibians) are found on this island. The island is also home to an endemic organism called balanoglossus (Ptychodera fluva), a taxonomically unique living fossil that links vertebrates and invertebrates.”

However, it drew attention to the fact that:

“Over 35,000 of the 100,000 people living in the Reserve’s buffer zone make their living from fishing, seaweed collecting, or other marine-based activity. Of the 35,000, approximately 20,000 live in villages directly abutting the coast and make their living from the sea. Ninety percent of these fisher folk are artisanal (using wind or small engine powered craft) and 10% are mechanized trawler fishermen.”

Yet it is the move to mechanisation that is viewed as the perhaps the key driver for much of the ensuing problems, as the following indicates:

“The on-going mechanization of the fishery has displaced women from their traditional role in processing and marketing, forcing them to take up alternative livelihoods. Existing livelihood-related programmes in the buffer zone area do not provide adequate economic alternatives, and in particular do not adequately meet the needs of women fisher folk. As a result, peoples’ only alternative livelihood option has been the harvesting of wild seaweed or coral, which they have been over-harvesting. Existing livelihood programmes are also plagued by information gaps preventing the neediest people from accessing information on appropriate technologies, markets and reasonable lines of credit. Currently, moneylenders provide most of the available credit at prohibitively high rates of interest.”

While the Project addresses the symptoms of this through a whole range of social and economic development interventions such as alternative livelihoods, access to microfinance, and vocational training, and in other components attempts to tackle fundamental issues of increasing the integrated management of the Biosphere Reserve, increased awareness of the need and benefits of conservation, and improved enforcement of laws, it fails to address this fundamental aspect of the changing aspect of the fishery itself, perhaps for political reasons. The State Government has subsequently addressed this issue in its own time and way outside the auspices of the Project, e.g. by promoting a subsidy scheme to convert bottom trawlers to long-line vessels.

17. Being designed in 1997-98, the Project is one of the earliest GEF-3 projects and hence too soon to incorporate many lessons that have been derived from previous GEF projects. However, it does state that:

“Lessons learned from other projects have been brought to bear on the design of this project. Careful attention has been paid to other similar integrated conservation and development projects in India (e.g., the GEF Eco-development project and coastal zone management projects in Argentina, Belize, Cuba and Dominican Republic). Best practice reviews have also been consulted³.”

Logical Framework and Revisions

18. The logframe has proved to be an issue. The original logframe from the Project Document was adequate for the time it was designed and comprised five “Components” listed as A-E. These covered foundation and long-term funding of a Trust to coordinate the management of the Reserve; strengthening management operations; expanding the infrastructure of the Marine National Park; developing a biodiversity overlay for the Biosphere Reserve; and developing and demonstrating sustainable livelihood options. The 43 indicators were a little numerous, and while they were limited by the practice of the times – baselines were absent, not all indicators had quantitative targets – they were largely adequate. Surprisingly for a project which was approved by GEF in 1999 but not started until 2002, there was no inception workshop or report so the logframe was not revised. However, the first meeting of the Gulf of Mannar Biosphere Reserve Trust’s (GoMBRT) Board of Trustees, which was acting as the *de facto* project supervisory body, held in August 2002, decided to change the Project’s implementation strategy to concentrate on awareness raising and livelihoods development for the coastal village communities, but without changing the logical framework, budget or timetable. At the time of the 2008 Mid-term Evaluation (MTE), this change had never been formally approved by the TPR. After significantly slow implementation in the early years (see paragraph 41), in January 2006 the Project Manager convened a workshop to revise the logical framework, but no changes were again endorsed or made formally. In 2008, the MTE recommended that the logframe be revised as part of a comprehensive overhaul of the Project’s implementation. It appears that this was eventually undertaken in 2009, and a new logframe was developed and produced. This logframe converted the five “components” to “outputs” rather than devising the more usual set of outcomes and outputs, and revised the indicators down 27 which are largely SMART. However, occasionally an indicator appears not to relate to the Output whose progress they are supposed to be measuring. For example, under *Output 4: Protocols for monitoring coastal and marine biodiversity developed* it is unclear how an indicator *# of offenders identified and preventive detention undertaken* relates to the development of monitoring protocols.

19. Somewhat surprisingly, the Project Steering Committee decided not to adopt this version since the Project was believed to be very close to its end at that time. Curiously, once the Project received its three-year extension to 31st December 2012, this new logframe was still never adopted formally and indeed appears to have played no role in project implementation. The situation is complicated further by the fact that the PIRs appear throughout to have devised a simplified set of indicators from the logframe for their own use. There is no record of how these were adopted, and changed between PIRs, but there is evidence from the interviews that these amended indicators were the ones that the

³ de Fontaubert, A. Charlotte, *et al.* 1996. Biodiversity in the Seas: Implementing the CBD in Marine and Coastal Habitats. IUCN. Washington, D.C. USA. and Nakashima, S. 1997. Integrated Coastal Management as Best Practice in GEF Project Development: Lessons from Biodiversity Projects in Marine, Coastal and Freshwater Ecosystems. Unpublished. UNDP-GEF, New York, New York, USA.

Project's management considered the most important and seem to have reported against. Although it has never been formally adopted, or seemingly used for management purposes, the TET has adopted the 2009 version in order to assess the level of achievements (see [Annex IV](#)) and to provide a framework for evaluation purposes since, after consultation with the UNDP-CO, the original version was deemed too out-of-date to provide a usable framework for the evaluation.

UNDP Programming Context

20. The Project was designed so far in advance of the *United Nations Development Assistance Framework for India* and subsequent *Country Programme Action Plans* that such a programming context was not relevant at that time. Nonetheless the Project's main elements related to biodiversity conservation, poverty reduction, and sustainable livelihoods are central to the fabric of UNDP's core values.

PROJECT IMPLEMENTATION

PARTICIPATING AGENCIES

21. The Project has been executed in accordance with the standard rules and procedures of the UNDP National Execution Modality. The Project's executing partner agency has been the **Ministry of Environment and Forests** which is the GEF National Focal Point in India. The Project's implementing partner has been the **Government of Tamil Nadu and the State Forest Department (FD)** and through this the Government has exercised financial control and management of the Project with the National Project Director acting as the approving officer and the National Project Manager as the certifying officer for payments; but it has not been involved in the flow of funds. The UNDP-CO has signed the quarterly budgets and annual workplans, provided an assurance role by always having a presence on any selection panel, and on occasion has made direct payments (thereby acting as a business agent to provide those services). UNDP has acted through the Project Document to empower the Project to enter into contractual arrangements with physical and legal persons on their behalf, and to manage project funds, including budget planning, monitoring, revisions, disbursements, record keeping, reporting and auditing that all observe UNDP rules.

Stakeholder Participation

22. In addition to the Forest Department, the Project involved a range of organisations, particularly within the State Government who were the major source of co-financing. One of the key design aspects of the Project, which has proved very successful, is that it did not set up parallel implementation structures but chose to work directly through government institutions. Senior State Government officials have been prominent in providing support and in being involved in some of the coordination committees established under the GoMBR Trust, e.g. the State Level Coordination Committee (SLCC) and its Empowered Sub-committee (see [Annex VIII](#)). However, at the implementation level, the Forest Department predominated and the TET believe that it would have been beneficial had a larger role been given to the Fisheries Department – particularly for fisheries conservation initiatives which have been largely lacking. Three NGOs played varying roles being contracted to undertake aspects mainly concerned with awareness-raising. These were the Dhan Foundation, the Arumbugal Trust, and the M.S. Swaminathan Research Foundation. Thirteen scientific research institutions were also contracted to undertake the scientific aspects of the Project, key amongst which were the Suganthi Devadason Marine Research Institute, the Fisheries College and Research Institution, Thuthukudi, and the Centre of Advanced Study in Marine Biology of Annamalai University. A full list of the research institutes and the projects undertaken are provided in [Annex X](#).

23. The Project focussed efforts on building local capacity for biodiversity conservation, including both government staff and local residents, through a mixture of formal training sessions and on-the-job mentoring in appropriate livelihood activities and in natural resource use. A key factor influencing the significant success of the work with the local communities has been the central role played by Field Project Workers whose skill, patience, dedication, and enthusiasm should be rightly applauded. As a result, the scepticism or even open hostility showed by these communities in the early stages of the Project has been turned into engagement, participation, and motivation.

24. Sadly, the Project lacked a Communication Strategy, but it still managed to reach a wide audience through good communication at many levels – an informative website with an extensive document repository (<http://gombirt.org/>) which was frequently updated; a number of attractive brochures, pamphlets, and booklets; posters for local schools and village meeting centres. The lack of a core “brand” for the Biosphere Reserve with a simple message and a simpler more memorable logo than that produced is viewed as a missed opportunity to draw stakeholders together and assume close identity with, or ownership of, the Reserve as the Lead Evaluator has seen in many other cases⁴. Some learning materials have been produced but limited effort appears to have been made to capture knowledge and to disseminate it to a wider audience, although a few informative policy briefs were published. It is noted, however, that the Trust Director was invited to a number of national forums where he shared his experiences on governance, livelihoods and mainstreaming with respect to coastal and marine biodiversity including the *Bay of Bengal Large Marine Ecosystem* Project, a joint initiative between India and Sri Lanka and agencies such as IUCN and GIZ; and the Project was showcased at the Convention on Biodiversity Conference of Parties #11 held in Hyderabad in October 2012. On the other hand, a wide range of education materials, awareness publications, and “how to” documents such as manuals and guidelines have been published for beneficiaries and stakeholders. Furthermore, many of the scientific findings have been made available to the wider conservation community of academics and practitioners through a series of scientific articles either published by the Project itself or through peer-reviewed journals.

The Project has worked closely with a small number of organisations but with a large number of communities throughout and the active engagement of stakeholders has been vital to fulfilling its achievements, hence stakeholder participation is evaluated as **Satisfactory**.

Gender

25. Gender equity is effectively absent from the Project’s design. The Project Document refers to it just once, and then only in Annex E. However, it does note in a number of places that women will be targeted in developing alternative livelihoods, and that they will comprise 50% membership of the “Village Marine Conservation Councils”. In the event, while gender equity has not been directly focussed upon as an issue in its own right, there has been a recognition throughout that to effect change within the fisher communities it is necessary to deal with the women and that through this route the economic conditions of families can be improved. As a result, 2,341 self-help groups have been formed comprising 34,699 members, more than 1,800 of which (>76.7%) were women’s groups with 27,413 (79%) women members. The Project claims that no government scheme has ever achieved such a women-focussed result. However, this appears to be the only gender equity success. The target of 50% women membership of the VMCEDCs is reported by VMCEDC presidents as being largely met, but such equality falls away sharply when leadership roles are considered and perhaps only 25% of VMCEDC presidents are women⁵. Even then, it is reported that they are heavily influenced in their decision-making roles by their husbands.

26. Within the Project context, it is also clear that there is considerable gender inequality with men dominating in all of the governing committees; in the senior management of the Project and Trust office; and in the field staff of the participating line departments. The Project employed no women amongst its 44 Anti-poaching Watchers even though one of the major groups of poachers was women seaweed collectors. Women Anti-poaching Watchers could have made greater contact with this

⁴ **State Government comment:** *The Stakeholders have accepted the logo to the fullest and even a small child can look at it and say “this belongs to the Trust”, and fishermen are open to the conservation concept under GoMBRT as a “brand” though there is a difference of opinions.* **TET response:** the TET doubts that the first assertion has ever been tested or that a variety of logos were field tested for recognition before one was selected. We are not sure what the second part of the comment is trying to convey.

⁵ **State Government comment:** *Although the women leadership achievement is minimal at the moment, the forecast is the women involved have become role models in their respective villages. This in turn made other women to boldly come forward. Moreover the majority of women Field Project Workers engaged by the Trust is another example for women empowerment.* **TET response:** No comment re the first point, but the second is not an example of women’s empowerment – employment of women on the bottom rung of the Project staff hierarchy because the main target of the work is to interact with women in the fisher villages is not empowerment. If the government was truly interested in empowering women, some of the supervisory posts would have been filled by women. They were not.

group, helping to raise awareness⁶. Women have been given a role only among the 65 Field Project Workers employed by the Project, where in 2013 50 are women (initially this was 62)⁷. The TET finds the situation largely unchanged from that described with concern by the MTE.

IMPLEMENTATION APPROACH

Project Oversight

27. Operational oversight of the Project was vested in the Project Steering Committee (PSC) comprising 14 members and chaired by the Chief Secretary of the Government of Tamil Nadu (see Annex VI) as established under Government Order N^o. 127 dated 24th May 2004. Interestingly, the Project Document provides no details as to project oversight, not even to the point of indicating that a PSC should be established; hence there is no guidance as to what was expected of it nor how often it should meet. The PSC met twice in 2003 and then confusion appears to have set in and the overlap in membership between it and the GoMBR Trust's Board of Trustees, which held similar membership, and the lack of clarity between the mandates of the two bodies, meant that the Board of Trustees appears to have met in lieu of it – twice in 2004, then once each in 2005, 2006, 2008, and 2009 – note no meeting took place in 2007. Then in 2009, separation of powers appears to have been re-instated, presumably at UNDP's behest, such that the PSC met each December in 2009-2011 (but not 2012) while the Board of Trustees continued to meet almost annually in 2010, 2011 and 2013 – see Table 5. A Tri-partite Review was held once in November 2008 but the structure has been formally phased out by UNDP globally. The situation is further confused by the complicated system of six coordination committees established to enhance communication and coordination between stakeholders (predominantly government departments). As the MTE noted,

“the Project Manager/Trust Director is a member or member secretary of each of the six committees, each of which is required to meet at least twice a year, necessitating generation of agenda papers, reports and minutes. A considerable portion of the capacity of the small Trust office is thus spent on servicing the committee mechanisms. ... a key issue is that under the present system, the Trust Director takes instructions from each committee rather than being able to use any of the committees to direct an integrated programme of Biosphere Reserve activities.”

The TET found no evidence to suggest that things had changed and believes it is something of an indictment that for a project aiming to bring closer coordination to an area the size of the Biosphere Reserve with its multiplicity of interests, it has not been able to provide clarity and rigour to its own oversight arrangements (see also paragraph 30).

TABLE 5: MEETING DATES OF OVERSIGHT BODIES

Meeting No.	Board of Trustees	Meeting No.	Project Steering Committee
I	19 Aug 2002	I	14 Feb 2003
II	09 Mar 2004	II	05 Sep 2003
III	05 Nov 2004		
IV	15 Jul 2005		
V	31 Aug 2006		
VI	08 May 2008		
VII	15 Jul 2009	III	09 Dec 2009
VIII	29 Dec 2010	IV	03 Dec 2010
IX	22 Aug 2011	V	07 Dec 2011
X	15 Feb 2013		

⁶ **State Government comment:** *It is true that women seaweed collectors poached in the MP area but they cannot be taken as Anti Poaching Watchers mainly because men were required to transport them in boats to the site of collection. If this is the case, the main role played by Anti-poaching Watchers at sea is not met.*

⁷ **State Government comment:** *The women FPWs left their jobs after marriage or some FPWs were terminated because of their inefficiency or malpractice and hence their drop in number.* **TET response:** But this begs the question of why they had to be replaced by men rather than other women.

Project Management

28. The Project's organisational structure has been led by government-deputed staff with the Principal Secretary⁸, Environment and Forests, of the Government of Tamil Nadu (GoTN) being the **National Project Director**, (a part-time role funded by the GoTN), and the Chief Conservator of Forests⁹ being the **National Project Manager** and Director of the Gulf of Mannar Biosphere Reserve Trust (a full-time role funded fully by GEF). The regular rotation of Government level staff has led to these posts being held thus:

National Project Manager:

- Dr. V.K. Melkani – 25th July 2002 to 30th Jun 2003
- Mr. A. Ramkumar – 4th June 2003 to 18th Oct 2005
- Dr. V.K. Melkani – 19th Oct 2005 to 10th Dec 2010
- Mr. H Malleshappa – 11th Aug 2008 to 2nd June 2009¹⁰
- Dr. (Mrs.) Aruna Basu Sarcar – 3rd June 2009 to 30th July 2010
- Mr. S. Balaji – 9th Aug 2010 to 31st Dec 2012
- Dr. R.K. Bharathi – 1st January 2013 to present

The 2009 PIR was critical of the frequent changes in Project staff noting that “*This frequent change of staff has serious implications in achieving the desired results.*” The frequent rotation of Government staff in other departments also resulted in breaks in continuity of approach and changed levels of technical competence, thereby creating delays and decreasing the effectiveness of coordination committees. All other key management and implementation roles have been played by State Government staff on deputation through relevant line agencies, predominantly the Forest Department¹¹. The GoMNR Trust has acted as the Project Coordination Unit throughout. In 2010, UNDP recruited a Programme Specialist to assist with technical direction and provide a liaison role to facilitate progress towards the end of the Project. At the field level, the Project recruited 65 Field Project Workers to act as community mobilisers with the job of providing the face of the Project to the fisher villages, amongst other things undertaking awareness raising, organisation of meetings, and administration of the micro-credit facilities for the self-help groups. These Field Project Workers reported through the existing line officers of the Forest Department. Twenty Anti-poaching Watchers were recruited by the Project from the fishing communities in 2006 with another 24 recruited in 2010 to increase surveillance of the islands in the Marine National Park and help alert the enforcement agencies. This number has now declined to 32, for unknown reasons. All staff during the Project period were paid for by GEF funds, although since 1st January 2013 the GoTN has taken over the payment of the salaries of all staff remaining. As the MTE also notes, deputation of staff from line departments to GoMNR positions has provided neither continuity of staff nor motivation since the area is seen as an unattractive isolated outpost with poor career prospects. As a result, there has been difficulty in filling positions and keeping staff and despite recent incentives offered by the State Government to attract personnel, at the time of the TET there were still vacancies for three of four rangers, six of 12 foresters, and all four office assistants.

29. The Project's implementation started particularly slowly with most efforts directed at creating an enabling environment for conservation issues among the various stakeholders and raising the understanding of the local communities with regard to the process of participatory conservation efforts. This resulted in very low rates of delivery over the early years and not until 2006 did work really begin in earnest. What is apparent is that once this occurred, implementation focussed on the relatively easy components of the Project, particularly the livelihood aspects. This appears to have

⁸ At the time of the TET, there was no Principal Secretary in the Department, the post being held by an Additional Chief Secretary.

⁹ At times the position was held by a Conservator of Forests.

¹⁰ Mr. Malleshappa was undertaking additional work at the time, apparently hence the overlap of dates with Dr. Melkani.

¹¹ **State Government comment:** *Depending upon availability of officers or depending on the situation warranted, the Trust Directors and respective staff members were deputed to the Trust. Moreover, there is a large vacancy to be filled up in the State Forest Department as a whole!*

resulted from the first meeting of the Board of Trustees in August 2002 when, according to the MTE, they:

“resolved that the project would be implemented as an “eco-development” initiative, based on the approach adopted under another project¹² with which committee members were familiar. The decision should have been reviewed by the project’s formal supervisory body, the TPR, but this was not done. It meant a significant change in the overall strategy for project implementation, and led to other elements of the project not being acted on as originally planned, with generally less activity and progress under components 2, 3, and 4, compared to 5.”

This decision has especially hampered the challenging activities required to achieve the higher objectives of the Project and has fallen into the trap that the GEF STAP reviewer was keen to avoid, namely:

“The articulation of the project into five major components has the advantage of focussing on the key elements of success. Yet it should be clear that they have to be implemented in a fully coordinated way as a single Biosphere Reserve and not as separate units”.

Although the Trust was established successfully, it has not been developed or used as the designers foresaw as a statutory apex body. This may be a result of changing political imperatives during a project lasting more than 13 years from its design, inadequate understanding of the concept, reticence of senior civil servants to make the necessary organisational changes, reluctance among government departments to cede some of their powers, or as the MTE postulates because:

“the project and logical framework were designed with insufficient participation of the principal partners responsible for subsequent organisation and implementation of the project”. [See also paragraph 87 *et seq.*]

As a result, and despite contrary recommendations from the MTE, the balance of the Project has been implemented with protection and socio-economic development to the forefront and higher level conservation functions largely relegated to the background. Even where policy-based decisions have been taken, they are largely protectionist in nature, e.g. a ban on trawling between the coast and the islands; a seasonal ban on the collection of seaweed; conservation management initiatives such as support for sustainable exploitation of marine resources by local people are largely lacking – the only mariculture experiment has been with seaweed, and the creation of artificial reefs has been limited to close to the islands in the core zone where fishermen are not allowed to fish. Nonetheless, it is important to stress that despite this imbalance between conservation, protection, and socio-economic, those activities undertaken, particularly with regard to the latter, have been implemented on a very large scale and to a very high standard.

Adaptive Management

30. The Project’s adaptive management has been notable by its absence. In line with the MTE’s findings, the TET notes that the logframe has not been used in any meaningful way to guide implementation of the Project. This is clear from the fact that at the end of the Project the original logframe as designed in 1998, was still “in use”. In fact, if it had indeed been being used to any meaningful degree its limitations would have been discovered at a very early stage and it would have been reviewed and improved as a result. That it was reviewed twice in 2006 and 2009 but that neither new version was adopted also speaks volumes for the lack of understanding of project management displayed by those overseeing the Project. The TET finds the UNDP-CO’s lack of attention to this point surprising, but acknowledges that it was implemented under the national implementation modality which limits the CO’s influence. This in turn rather beggars the question of what if any framework was being used to guide the Project – a question that even after many interviews the TET finds impossible to answer. Although the monitoring systems in place were being carried out with due process, the results seem not to have been used for any sort of strategic review – no system of

¹² The Kalakad Mundanthurai Tiger Reserve project was a World Bank-funded eco-development initiative running from 1995 to 2001.

feedback and adjustment has ever been in place, and no risk analysis has ever been performed; indeed as will be seen, the risk log has not even been filled in for large periods of the Project (see paragraph 49). Project supervision has been confused throughout with those in charge unable to determine the differences between the ToR of the Board of Trustees and the PSC (see paragraph 27). With the Trust Director also taking instructions from the coordination committees, it is no wonder that confusion has resulted. As a result, almost no change in the fabric of the Project is evident from its original design to the end of its implementation except for the move away from implementing the institutional and policy reforms; positive changes appear absent, e.g. even simple suggestions to develop eco-tourism in the area have not been acted upon (see paragraph 93).

Technical Management

31. The technical management of the Project has, with the exception of the Management Plan (see paragraph 64 *et seq.*), generally been of a fairly high standard. The scientific work has been carried out to a level commensurate with that expected from well respected-research institutes. Work on the ground has also been good thanks to a team of committed Field Project Workers who have worked hard in the face of initial hostility to organise effective awareness-raising programmes for the communities and who have provided solid advice and administration with regard to the micro-finance scheme. It has been impossible for the TET to assess the level of training provided to Government officials and line department staff, but reports are positive. The high rate of employment for youths completing the vocational training courses is testament to their value.

The Project has had mixed management with confused and generally poor oversight; and a risk-averse strategy has skewed the Project away from taking much-needed innovative steps on institutional and policy reform, plumping instead for more easily implemented activities on protection and socio-economic development. As a result, the implementation approach has been evaluated as **Moderately Satisfactory**.

UNDP supervision and backstopping

32. UNDP-GEF supervision has been accomplished by standard procedures but the level of competence appears to have varied greatly. While the TET has no evidence to suggest anything untoward, the extremely slow delivery over such a long period at the start of the Project has to be questioned. It is understood that the Project Manager during that period was part-time, and the PIR 2007 reports difficulties including:

“... large efforts had to be made to create an enabling environmental among various stakeholders to conservation issues of the region. In addition to delay in the process of the Governmental formalities to fall in place, local community also took time to understand the process of community initiated conservation efforts.”

However, the TET would have thought that the very low delivery against the budget for the first three years of a seven-year project would have created a greater sense of urgency within the UNDP-CO to make a greater and earlier intervention.

33. The TET understands that the Project has been implemented under a national implementation modality that restricts UNDP’s involvement – often to the CO’s frustration. However, it believes that UNDP’s approach (both that of the CO and the successive RTAs in Bangkok) has not been assiduous enough in guarding GEF’s interests and that it has provided insufficient oversight intervention to confront the State Government and seek compromise resolutions on the really serious issues that have arisen during the Project. These have been:

- the decision by the first Board of Trustees’ meeting in August 2002 to unbalance the Project by concentrating on the local livelihood and awareness functions at the expense of the higher level policy and institutional reforms (see paragraph 29);
- the inability of the Project to review and update its logframe (see paragraphs 18-19);
- the move by the State Government to provide its co-financing contribution as in-kind instead of as cash as it had committed to (see paragraph 40); and
- the non-capitalisation of the Long Term Funding Mechanism (see paragraph 63).

34. Regarding the first of these, it is probable that the implications of the decision taken at the first meeting of the Board of Trustees were not realised by the UNDP-CO; after all, the Board of Trustees was not at that point operating as the PSC. However, the GEF money was provided for conservation actions to “*catalyse the sustainability of protected areas*” and not undertake a social development project. The TET believes that the UNDP-CO should have reminded the State Government that it signed a contract with GEF to that effect and taken steps to reorient the Project back to its original concept at a much earlier stage.

35. With the logframe, it seems incomprehensible that a Project was allowed to start three years after it had been designed without an inception workshop or report where the logframe should have been revised; and then for a logframe workshop to have been convened in 2006 without the results being adopted; and then a MTE recommending revision of the logframe which took over a year to complete, and which UNDP then allowed the PSC to not endorse; and still then not to have had the issue raised again at the point when a three-year extension was granted. The logframe is the central guiding tool for any project and yet the UNDP-CO have let this Project run for ten years on an inadequate version which by the Project’s end was at least 14 years out of date! And in addition to this, an unauthorised and simplified version appears to have been adopted by GEF HQ for use in the PIR which the CO must report against which no-one in the CO ever questioned how it came into being and for which no records can be found.

36. Finally, two aspects of State Government’s co-financing are worrisome. First, the signed cover page of the Project Document states clearly that the Government of Tamil Nadu will contribute US\$ 16,965,000 to the Project yet by page two of the Project Brief inside the Project Document, this figure has been reduced to US\$ 11,180,000 but this amount is clearly identified as cash co-finance. However, as the finance section of this report shows, somehow this cash contribution became reduced to nothing¹³ and in-kind finance, of which none had been identified in the signed documentation, has become US\$ 10,597,736. These enormous changes in the different types of finance appear not have raised a single query from the CO, even though the MTE drew indirect attention to the issue (see paragraph 40).

37. Second, the UNDP-CO has pursued the non-capitalisation of the Long Term Funding Mechanism (LTFM), envisaged as the key tool for the sustainability of the Trust, with more vigour, but it has not happened. The MTE, referring to the LTFM as “*the Fund*” notes that:

“the planned capitalization of the Fund by the leveraged co-financing of \$4 million from GoTN should be completed as soon as practicable in the next phase of the project”.

The UNDP-CO continued to request this money from the GoTN, and a letter dated 29th April 2010 from the Deputy Country Director to the Project Director notes:

“For the long term sustainability of the project, GEF had committed USD 1 million. In this regard, as per the project document and the MTE report it was suggested to set up a Community Foundation in which USD 4 million be also deposited by the GoTN (over a period of two years) as a capital trust fund. In line with this agreement, the committed amount of USD 1 million of the GEF funds have been utilised to support the initial capital for the 252 community micro-funds, but co-financing has not been available.”

but no reply was received and although the matter was followed up by the UNDP-CO in various PSC meetings, the State Government has proved to be highly elusive over the issue.

38. On a day-to-day level, UNDP has provided adequate supervision of the Project through its involvement in the meetings of the PSC and Board of Trustees and through the annual PIRs, but there was also frequent contact between the CO and the PMU. Members of the Energy and Environment Cluster have made regular field visits to the Project site, and have been heavily involved in regular

¹³ US\$ 269,811 in cash has been allocated by the State Government to provide cover for the period January-March 2013 until the annual budget for the financial year 2013-14 starts.

issues such as the review and approval of workplans and budgets, review of progress and performance against such workplans, and completion of the tracking tools. It appears that the CO was helpful and supportive throughout the implementation period, responding adequately to provide good guidance, honest and constructive criticism, and help to overcome particular problems as necessary.

The UNDP-CO has provided an adequate level of supervision but has not been assiduous enough in guarding GEF's interests, providing insufficient oversight intervention on the really serious issues that have arisen during the Project, hence UNDP's supervision and backstopping role is evaluated as **Moderately Satisfactory**.

FINANCIAL ASSESSMENT

39. Financial data on the Project has been remarkably, and worryingly, difficult to obtain from either the UNDP-CO or the Project Office. A set of standard tables was requested by the TET, yet after three weeks of waiting only fragmentary and conflicting data was returned. It is said that because the Project goes back ten years, the data is now hard to extract. Certainly the information arriving from the two sources was different and the UNDP-CO indicated that the records in the Project's office were likely to have some inaccuracies. Data from the years 2002-2007 have had to be taken from the MTE. No budgetary data from the Project Document could be provided. The TET does not understand why this should be so. The system should be that each quarter's expenditure is signed off ahead of new funds for the forthcoming quarter being released, and the expenditure records should have been entered into ATLAS, where they should still reside irrespective of how long the Project has been implemented.

40. Although a full appraisal has not been possible, a few key points can be raised (see Table 6). The first is the move made by the Government of Tamil Nadu to change its cash co-financing contribution, which it committed to when it signed the Project Document, to one of in-kind co-financing. In short, this is wholly unacceptable and the TET cannot understand how or why the UNDP-CO allowed this to happen – the TET avoids the word “agreed” since there is no document trail to show whether the UNDP-CO did in fact agree. In-kind co-financing is completely untraceable, the reason why GEF has largely abandoned this concept in recent years. The second is the total absence of the agreed in-kind co-financing promised by the Government of India and other sources. The TET notes that the MTE also raised this issue, stating that:

“A key issue for the project is the failure to secure and link the planned co-financing with the GEF funds. ... There was no indication given to the MTE that any of this co-financing had been made available or spent, either by the project manager/Trust Director or by a line department.”

The TET finds it staggering that either of these issues should have occurred, let alone both. The TET has regrettably been unable make the requisite enquiries since the financial data was provided only at the end of the report-writing period and not during the mission itself as requested. The State Government has been particularly elusive about why it has failed to provide its US\$ 4 million share of the capitalisation of the Long Term Funding Mechanism as envisaged in the Project Document (see paragraph 63). In the light of such large and unexplained discrepancies, the TET is minded to recommend that the accounts for the Project are audited, but it understands that an independent audit of the Project will take place later in 2013 as part of the Country Office Audit Plan for use by the UNDP-GEF Global Audit Authority. While the TET recognises that any such audit would not be able to audit co-financing that has not been shown in the combined delivery reports, it recommends that the independent team considers the issues and apparent failure of the mechanisms that allowed both these issues concerning co-financing to have come about.

The TET recommends that the independent audit to be undertaken as part of the Country Office Audit Plan later in the year examines the issues, the decision-making, and apparent failure of the mechanisms that allowed the State Government to replace its commitment of cash co-finance with in-kind co-finance; and the National Government to renege completely on its commitment of in-kind co-finance.

<i>Responsibility</i>	<i>Task</i>	<i>Time frame</i>	<i>Deliverable</i>
Independent auditors	Include an examination of the issues, decision-making, and apparent failure of the mechanisms connected to the co-financing of this project.	As scheduled	Audit report

TABLE 6: SOURCES OF ACTUAL FINANCING TO 31ST DECEMBER 2012 (US\$)

Cash financing	Budget*	Actual	%
GEF	7,650,000	7,650,000	100.0
UNDP	1,000,000	1,044,897	104.5
Government of Tamil Nadu	11,180,000	0	0.0
In-kind financing			
Government of Tamil Nadu	0	10,597,736	+
Government of India	5,800,000	0	0.0
Others	1,120,000	0	0.0
Total	26,750,000	19,292,633	72.1

SOURCE: UNDP.

NOTE: it is outside the scope of the TE to verify independently the financial figures contained in any of the tables and figures presented here through an audit.

41. If Project spending can be taken as a crude measure of the progress of implementation, then the Project has achieved only modest progress against that originally envisaged, since the sum disbursed at the end represents only 72.1% of the original budget and that after ten years of implementation rather than seven. Furthermore, since in-kind co-financing is untraceable, the actual sum spent may be less. Table 7 shows the breakdown of GEF spending by Output over time as retrieved from the MTE and provided by the UNDP-CO. These figures are graphed cumulatively in Figure 1. Allowing for the possibility of some inaccuracies, these illustrate a number of points:

- Almost 40% of GEF funds were spent on Output 1¹⁴. This includes project management costs but the data from UNDP do not allow these to be separated from the costs of the activities conducted under this output in support of the Trust and its coordination committees. Certainly Project Management costs are reputedly high – US\$ 434,619 was spent on funding the project/Trust office over the first three years when no project activities were actually taking place; and UNDP note in a letter that Project Management is budgeted at 20% of the total costs for the 2010 Annual Work Plan (see paragraph 43).
- Spending on Output 5 comprises one-third of the total spend whereas the total spending on outputs 2, 3 and 4 combined amounts to just 25% reflecting just how unbalanced the PSC let the Project become.
- The extremely slow start to the actual activities yet project management costs (Output 1) rising steadily throughout.
- The increasing focus on Output 5 (livelihoods) as the Project progressed.
- The negative figures for Output 2 are apparently due to adjustments in expenditure across different activity headings, although the total budget remains the same. [The TET makes no attempt to understand this explanation but reproduces it in answer to its question.]

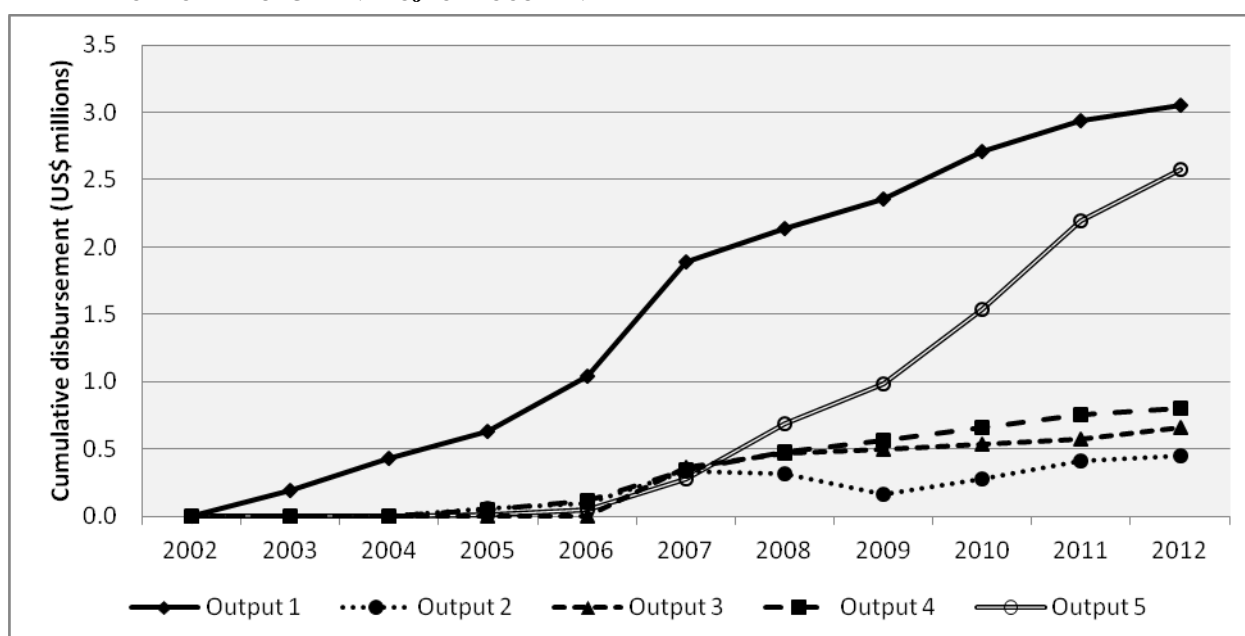
¹⁴ **State Government comment:** Please note that salaries of deputed staff were paid from the project funds until December 2010 and hence a high budget (salary covers most of the spending in Output 1 for a real long time). Establishment of PMU and asset creation were carried out during this period is noteworthy.

TABLE 7: TOTAL DISBURSEMENT OF GEF FUNDS (US\$) BY OUTPUT BY YEAR TO 31ST DECEMBER 2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%
Activity 1	491	190,727	243,401	198,559	411,364	847,957	240,584	220,016	361,050	228,904	113,920	3,056,974	39.94
Activity 2	0	0	0	58,272	36,176	241,532	-20,626	-148,452	111,467	137,668	36,952	452,989	5.92
Activity 3	0	0	0	0	1,087	365,841	97,011	28,827	41,747	39,702	84,699	658,913	8.61
Activity 4	0	0	0	46,766	66,299	234,542	125,870	87,129	99,464	94,573	52,333	806,976	10.54
Activity 5	0	0	0	14,228	30,408	233,646	410,084	290,505	554,690	658,627	383,538	2,575,726	33.65
Proj.Assurance								11,546	36,887	15,898	3,807	68,138	0.89
Convert							1,000					1,000	
Exchange gain/loss							27,052	7,205	-1,258	11,005	-10,251	33,752	
Total	491	190,727	243,401	317,825	545,334	1,923,518	880,975	496,777	1,204,047	1,186,376	664,997	7,654,468	100

SOURCE: 2002-2007 MTE; 2008-2012 UNDP.

FIGURE 1: CUMULATIVE DISBURSEMENT OF GEF FUNDS (US\$) BY COMPONENT BY YEAR AS A PERCENTAGE OF TOTAL BUDGET IN PROJECT DOCUMENT



Financial planning and management has left much to be desired and the Project has failed to secure any of its co-financing in the form that was originally committed. Accounting and reporting appears to have been adequate, but the inability of the Project or the UNDP-CO to provide sufficient information within an appropriate timeframe is of concern and has left the TET unable to undertake a satisfactory analysis, hence financial planning has been evaluated as **Unsatisfactory**.

Cost-effectiveness

42. The UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported GEF-financed Projects (2011) eventually defines the criteria of “efficiency” in Box 3 as:

“The extent to which results have been delivered with the least costly resources possible; also called cost effectiveness or efficacy.”

Since the term “efficiency” is rather ambiguous and could apply to efficiency in terms of time, energy-use or even carbon footprint, it has been replaced in this evaluation with the precise term “cost-effectiveness” to which it actually relates, as per Box 3.

43. In the absence of reliable financial figures from the Project or UNDP-CO, it is impossible for the TET to determine whether the Project has been cost-effective or otherwise. However, the TET

notes that both the MTE and the UNDP-CO, in a letter to the Project Director dated 29th April 2010, drew attention to the high project management costs engendered by the Project – 20% of the total costs for the 2010 Annual Work Plan. This is certainly towards the upper end of project management costs incurred by other projects in the region, e.g. on the Western Terai Project¹⁵ in Nepal they were 26.8%; UNEP-GEF Siberian Crane Wetlands Project¹⁶ was 13.8%; UNDP-GEF CALM Project¹⁷ in Cambodia was 13.1%; that for the UNDP-GEF HHRB Project¹⁸ in China was 11.25% at its mid-term; but all were much less than that for the UNDP-GEF Altai Sayan Project¹⁹ in Mongolia which came in at a whacking 33.8%. The TET also notes concerns over two other issues:

- **Research institutions:** Initial research projects were sanctioned after a two-day “*National Research and Monitoring Moderation Workshop*” held on 15-16th December 2006 in Madurai with the aim of identifying gaps in, and minimising duplication of, existing research work. Further to this, new research projects were identified but the process used by the Trust’s staff was less transparent and much duplication ensued. Intervention by some members of the Trust’s Research Advisory Committee led to these later projects being halted and the institutes concerned being asked to return initial payments – something that has still not been achieved in all cases. The atmosphere surrounding the whole process of sanctioning the research projects even today remains extraordinarily febrile with significant levels of academic rivalry clouding any attempt to decipher the issues. The TET understands that one meeting held at the Mandapam Regional Centre with participants from various research organisations raised strong objections to the allocation of so many of the project contracts to the Sugandhi Devadason Marine Research Institute (SDMRI) and that the meeting ended in discord as a result. The TET notes that although 12 institutions have been used by the Project to undertake research, there has been a marked bias with eight (30%) of the contracts accounting for 25% of the total spend on research being placed with SDMRI in Thuthukudi (see [Annex X](#)). The TET notes that operational procedures for sanctioning such projects are governed by the prevailing government rules and procedures and that due diligence has been followed in arriving at the decisions made²⁰. The TET understands that all contracts were awarded on merit and that the preponderance of projects let to SDMRI came about through their high technical proficiency in underwater studies. Nonetheless, it is clear from several interviews that there remains considerable resentment amongst the local scientific community which had expected a more equitable share of the contracts. The TET also notes that the SDMRI is a private institute whose accounts are not open to full audit, and while no wrong-doing of any kind is suggested, the fact alone has caused some concerns to be expressed to the TET. The TET suggests that in future, in order to avoid such intimations and ensure full transparency, the UNDP-CO makes greater provision for full auditing of contracts placed with similar organisations.
- **NGOs:** The Arumbugal Trust was hired to carry out awareness-raising through street theatre and folk dance, every year from 2005 to 2012 except for 2009 (when Dr. (Mrs.) Aruna Basu Sarcar refused to hire them for unknown reasons). Putting aside a discussion of whether street theatre is an effective form of raising awareness on conservation messages or not, the cost of a single

¹⁵ *Creating Biodiversity Conservation Landscapes in Nepal’s Lowland Terai and Eastern Himal Areas* ATLAS ID 41382 PIMS 1831

¹⁶ *Development of a Wetland Site and Flyway Network for Conservation of the Siberian Crane and Other Migratory Waterbirds in Asia* IMIS: GF/2328-2712-4627 and 4630; PMS: GF/6030-03.

¹⁷ *Establishing Conservation Areas through Landscape Management (CALM) in the Northern Plains of Cambodia* ATLAS ID 47478 PIMS 2177.

¹⁸ *Conservation and Sustainable Use of Biodiversity in the Headwaters of the Huaihe River Basin* ATLAS ID 59594 PIMS 3934.

¹⁹ *Community-based Conservation of Biological Diversity in the Mountain Landscapes of Mongolia’s Altai Sayan Eco-region* ATLAS ID 39250 PIMS 1929.

²⁰ **State Government comment:** *All research funding passed through the RAG and projects were approved only after a presentation and satisfactory budget approval. Projects were not given in terms of sharing but by competition; the best expertise is called for in the region, no bias and the projects are funded to the best scientific organisation which has the capacity to carry out the study. It is important to note that the scientific community that did show “resentment” were also part and parcel of the RAG and knew everything happening there, including their nod to go ahead in sanctioning projects for various research organisations.*

performance conducted by the Arumbugal Trust was IRs 3,500 (US\$ 65) in 2005 yet by 2012 this had risen to IRs 10,000 (US\$ 185), a 285% increase. To put this into perspective, the Anti-poaching Watchers' monthly salary was IRs 2,500 (US\$ 46) in 2005 and in early 2013 was raised to IRs 4,000 (US\$ 74), a 160% increase over a slightly longer time span; while the monthly salary of the Field Project Workers rose from IRs 2,500 to 4,500 (US\$ 46 to 83) over the same period, a 180% increase. Such inflated costs being paid to an NGO with a seemingly special contractual relationship with the Project shows little in the way of cost-effectiveness.

The TET has insufficient reliable financial data on which to assess cost-effectiveness, but notes concerns over high project management costs raised by others, and notes some small concerns that certain organisations were favoured despite inflated costs.

MONITORING AND EVALUATION

The design period is so long ago that project M&E was given little serious attention, hence it is not possible to evaluate it against current standards. M&E implementation has been generally of a high standard, with good progress monitoring and strong internal activity monitoring, but with limited impact. Unfortunately M&E does not appear to have been fed back into any adaptive management hence the overall rating for monitoring and evaluation has been evaluated as **Moderately Satisfactory**.

M&E Design

44. The Project Document was designed so long ago that it predates GEF's improved monitoring and evaluation policy of 2006 by at least eight years! The logframe uses components rather than outcomes, and indicators were generally not SMART. The design contained neither any monitoring and evaluation plan nor any budget allocation for M&E. There is a section on monitoring, but this directed at the scientific monitoring of biological and environmental parameters. The paragraph on evaluation describes a schedule for three independent evaluations.

The design period is so long ago that project M&E was given little serious attention, hence it is not possible to evaluate it against current standards. Monitoring and evaluation design has been evaluated as **not applicable**.

M&E Implementation

45. Monitoring and evaluation of Project activities have been undertaken in varying detail at three levels:

- i. Progress monitoring
- ii. Internal activity monitoring
- iii. Impact monitoring

46. Progress monitoring has been good and has been made through quarterly and annual reports to the UNDP-CO. The annual work plans have been developed at the end of each year with inputs from Project staff and the UNDP-CO. The annual workplans were then submitted for endorsement by the PSC, and subsequently sent to UNDP for formal approval. Trust has been in close communication with the UNDP-CO (3-4 times per week) regarding progress, the work plan, and its implementation. The Trust has also ensured that the UNDP-CO received quarterly progress reports providing updates on the status of planned activities, the status of the overall project schedule, the products completed, and an outline of the activities planned for the following quarter and an estimate of expected completion date. These report formats contained quantitative estimates of project progress based on financial disbursements and these have served as an additional monitoring tool. The UNDP-CO generated its own quarterly financial reports from Atlas from data provided by the Trust. These expenditure records, together with Atlas disbursement records of any direct payments, served as a basis for expenditure monitoring, and budget revisions, the latter on an *ad hoc* basis depending upon the rate of delivery.

47. From the quarterly reports, the UNDP-CO has prepared Quarterly Operational Reports (150-word fixed-format) which have been forwarded to UNDP/GEF Regional Coordination Unit in Bangkok, and in turn submitted to UNDP HQ and to GEF. The major findings and observations of all these reports have been given in an annual report covering the period July to June, the Project Implementation Review (PIR), which is also submitted by the Trust to the UNDP-CO, UNDP Regional Coordination Unit, and UNDP HQ for review and official comments, followed by final submission to GEF. All key reports were presented to PSC or Board of Trustees' members ahead of their meetings and through this means, the key national ministries and national government has been kept abreast of the Project's implementation progress. Unfortunately, there appears to have been no feedback from any of this progress monitoring into adaptive management (see paragraph 30).

48. The Trust and the UNDP-CO have maintained a close working relationship, with Project staff members meeting, or talking with, CO staff on an almost daily basis to discuss implementation issues and problems. Since 2010, a UNDP Programme Specialist based in the Trust's office has been the main interface/liason point. The PIRs available to the TET appear incomplete in places, but the UNDP-CO appears to have monitored the Project regularly through a number of field visits by the Energy and Environment Team Leader and/or the Biodiversity Programme Officer – since the MTE in April 2008 these have been one in 2008; four in 2009; five in 2010; four in 2011; and two in 2012. It is understood that reports were made to the office. This indicates a good level of supervision. The Regional Technical Advisor made a field visit to the site in May 2011. The CO has also participated in all Project Board Meetings. The Project has been subject to annual audit by independent auditors appointed by UNDP with nothing of significance found wanting.

49. The Project's risk assessment has been updated by the UNDP-CO but only intermittently. The Risk Log shows no entries prior to September 2006 when ten risks are entered; then a gap to March 2008 from when entries are quarterly or more frequently until July 2009; then another gap until March 2012 when entries are again made quarterly until the Project end. None of the entries have been marked as "Critical". The management responses to the risks were not available to the TET. However, there is clearly some inconsistency in reporting, for example the operational risk entered on 15th June 2012 refers to the non-deployment of the boundary marker buoys and although these have still not been deployed, the entries under organisational in September and December 2012 show "*No risk has been identified*". One other area of concern is that although the Project is focussed on a single protected area, no attempt appears to have been made to complete either of the GEF Tracking Tools relevant to Strategic Objective 1 projects, namely the Management Effectiveness Tracking Tool or the Financial Sustainability Scorecard.

50. A Mid-term Evaluation (MTE) was undertaken in April 2008. Somewhat surprisingly, the comprehensive report contains no formal ratings for any of the elements usually rated, but a complete reading of the report returns an overview that the Project was considered to be to heavily biased towards the eco-development activities and was in need of re-balancing to effect changes at the higher policy and institutional levels. It contained 22 recommendations, primary amongst which was for the establishment of a Biosphere Reserve Authority to control activities within the Reserve; and a raft of measures designed to strengthen the project's management. The UNDP Management Response is generally fairly positive, although many of the responses indicated actions that were not subsequently followed through, while others are somewhat contradictory, e.g. having noted that "*UNDP and the state government partners do not agree to the suggestion of formation of authority due to constraints in current administrative structures*" under the Action for Recommendation 15 "*GoMBR management information System*", it states that "*BR Authority once formed may develop biodiversity management information system that is necessary to achieve management objectives and results*".

51. Internal activity monitoring undertaken by the Project's management appears generally to have been good comprising a range of mechanisms to keep abreast of the situation and to respond to any areas of concern. These comprised many of the methods used to track progress, and implementation has been heavily guided by the Annual Work Plan and the quarterly plans submitted to release funds. Since Trust officers were experienced Forest Department officials used to a top-down management system, management was generally smooth, although the financial management, which the MTE called to be strengthened, still appeared particularly weak at the time of the TE. An Eco-development

Officer reported direct to the Trust Director, while four Zonal Officers (Rangers) reported to him and a number of Sub-zonal Officers (Foresters) reported to them and managed the work of the 65 Field Project Workers. The annual work plan was broken down into monthly plans with targets fitted to take account of external constraints e.g. school holidays or key fishing seasons. The Sub-zonal Officers provided the Field Project Workers with instructions through meetings held once or twice a week and accepted suggestions back as to what work should be done and by whom. Weekly reports were sent to the Trust Director. Where external contracts were issued, these were mainly on a lump-sum basis payable according to milestones defined by time and quality – failure to achieve either resulting in forfeiture of some part of the payment. All were designed so that none lasted longer than two years. By and large, this provided enough incentive for sound delivery.

52. Impact monitoring, as usual, has been the least well-developed type of monitoring, but the Project has made efforts in certain areas. Scientific monitoring of things such as coral reef cover and measures of growth and health of artificial reefs has been quantitative and of the highest order. The Trust employed an M&E Officer from February 2010 but his job appears to have been restricted to the vocational training programme and involved i) evaluating the capability and facilities of the proposed training institutions; ii) determining the ToR between the Trust and the institution, iii) making quarterly direct performance evaluation of every student; and iv) attending a recruitment fair at the end of each course to assist students to gain employment and record the numbers of those who did. No quantitative impact monitoring was undertaken, but some indirect measures of progress were made through prize-giving for things like school or community awareness programmes which showed that information was being absorbed. Similarly, conservation awards were given by the Trust to people who had made outstanding contributions to biodiversity conservation in a number of areas. For study visits, participants were required to take part in panel discussions and present papers which gave an indication of what they had learned. However, some stakeholders are critical voicing concerns that the Project's monitoring has been based on ticking boxes (e.g. numbers of meetings held) rather than monitoring the understanding of concepts and whether activities have led to results. Even simple questionnaires to villagers with questions such as “*Have you visited other villages where demonstrations are available?*”, “*Have you tried new methods of ...?*”, “*What have you noticed as a result?*”, and “*Are you keen to spread conservation messages yourself?*” could have provided significant feedback which could have been used to influence management or adopt new approaches to activities.

M&E implementation has been generally of a high standard, with good progress monitoring and strong internal activity monitoring, but with limited impact monitoring although there is evidence that efforts were made in this sphere. Unfortunately M&E does not appear to have been fed back into any adaptive management, hence the implementation of monitoring and evaluation has been evaluated as **Moderately Satisfactory**.

PROJECT RESULTS

ATTAINMENT OF OBJECTIVES

53. A Summary of the Project's achievements is given directly below, followed by an outline of the attainment of objectives. This is followed by a Review of Outcomes to Impacts in Table 8 and a brief discussion on the verifiable impacts. A summary evaluation of Project Output is given in Table 9 followed by a more detailed description. A detailed evaluation of the level of achievements made against the indicators of success contained in the logframe is given in Annex IV.

Summary of Achievements

54. The decision by the Board of Trustees' first meeting in August 2002 to change the Project's implementation strategy to concentrate on awareness raising and livelihoods development for the coastal village communities has had a profound and far-reaching effect of unbalancing this Project's overall strategy. Instead of implementing a cohesive and comprehensive approach to the conservation of the Biosphere Reserve, i.e. conservation management, protection, and socio-economic development; the conservation management actions have largely been ignored to concentrate on the

more easily implemented actions relating to enforcement and livelihoods. Although the GoMBR Trust has been formed, it is not the apex decision-making body envisaged by the Project's designers and UNDP-GEF. The mechanism designed for its independent long-term financing has not been capitalised, and although the State Government has agreed to fund the Trust beyond the Project's end, it lacks teeth as a conservation body and its scope has been reduced to little more than awareness-raising and research functions. While the complicated series of coordination committees are also still operative, there is little evidence of their effectiveness since they meet less frequently than programmed, and the State Government's unwillingness to streamline the system is exemplified by a decision to retain a Director of the Trust itself, a Director of the Biosphere Reserve, and a Director of the Marine National Park. This is not modern conservation management in action. Higher level policy reforms on sectors impacting the Reserve have been restricted to a ban on trawling between the coast and the 21 islands of the Reserve; a ban on the registration of new trawlers in all ports in the State; and a seasonal ban on the collection of seaweed from around the islands – but all of which have had beneficial effects. The Management Plan developed by the Trust is rich in description but poor on prescription and again there is no evidence that it is being used as a basis for the day-to-day management of the Reserve; rather it appears to be document that is pulled off the shelf to show people or for reference purposes. On the positive side, however, the Project has done an outstanding job on those aspects it was redirected towards. It has formed a Village Marine Conservation and Eco-development Council in each of the 248 villages lying within the 10km-wide coastal belt of the Reserve and has introduced micro-finance facilities to 2,341 self-help groups benefitting 34,699 members. It has taken a long-term strategy of reducing the fishing pressure in the Reserve by improving the educational prospects of fisher family children through a number of means to encourage them to take up different and more economically viable professions. Awareness-raising activities amongst villagers has led to increased understanding and acceptance of the need for conservation of marine resources, and together with improvements in enforcement activities through the deployment of new boats and anti-poaching watchers, this has resulted in a decrease in the extent of illegal fishing activities in the Reserve. There is some indication that the marine environment is responding – the coverage of live coral on the reefs has shown a small increase. With the notable exception of seaweed cultivation, sadly, the Project has not taken any steps to develop marine resources for sustainable use by fishermen to help offset their lost opportunities from the increased restrictions, and eco-tourism is notable by its absence, but coral habitat has been extended by the development of artificial reefs within the Marine National Park, and valuable research has been completed on updating the Reserve's baseline. The evaluation of achievements against indicators (provided in [Annex IV](#)) shows that of the 26 indicators that it is possible to evaluate against (one is impossible), 16 (61.5%) show successful achievement at the end of the Project and five (19%) show achievement nearly successful – a good achievement.

Overall, the Project has achieved most of its major relevant objectives but it has significant shortcomings through it not fulfilling its intended institutional and policy reforms, hence its attainment of objectives and results is evaluated as **Moderately Satisfactory**.

55. Key Project achievements include:

- establishment of the Gulf of Mannar Biosphere Reserve Trust (something of a milestone achievement) as a cross-sectoral coordination body for management activities within the Reserve and to facilitate awareness-raising and livelihood development among the fisher communities living within the Reserve;
- six coordination committees established and operated at State and District levels under the auspices of the Trust;
- complete cessation of coral-mining within the Reserve;
- complete ban on trawling between the coast and the 21 islands;
- seasonal ban on collection of seaweed;
- no further issuance of registrations for bottom trawlers in Gulf of Mannar since 2010;
- increase in live coral cover of 2.2% between 2003-12;
- increase in total fish landings of 7.83% between 2008/9 and 2011/12 with constant effort;

- Village Marine Conservation and Eco-development Councils established in all 248 villages within the coastal zone of the Reserve through which awareness and educational activities have been organised for 77,000 fisherfolk;
- a total of 2,341 self-help groups have been formed comprising 34,699 members (>76.7% women) and given access to low-interest micro-credit through a corpus fund capitalised with IRs. 77.5 million (US\$ 1.435 million) but now standing at IRs 99.5 million (US\$ 1.843 million);
- more than 1,900 youths from the fishing communities have undergone short vocational trainings on 22 courses to help provide employment outside of the fishing industry;
- additional tuition has been provided to 2,500 students in 26 schools to help with critical examinations;
- three speedboats and three traditional craft purchased and deployed for anti-poaching patrol work;
- engagement of 33 Anti-poaching Watchers for deployment on islands to improve surveillance capability;
- excellent interpretative centre constructed at Kunthukal;
- management plan for the Reserve produced; and
- baseline data on Reserve expanded through targeted research studies and monitoring of coral reefs.

56. The main problem areas identified by the TET are:

- co-financing not forthcoming in the forms committed to;
- concept of establishing the Trust as an apex decision-making body not fulfilled;
- current embodiment of the Trust lacks teeth to play an effective conservation role and has highly restricted mandate;
- too little integration of management roles, e.g. a Trust Director, a Biosphere Director and a Marine National Park Director instead of a single role;
- no long-term financing mechanism capitalised to ensure independent funding of Trust's future activities²¹;
- coordination committees generally meet too infrequently to be effective;
- frequent turnover of Trust Director and other Government staff resulting in lack of continuity in vision and leadership;
- no buoys deployed to mark boundary of core zone; and
- management plan weak on prescriptions and not being used as a framework for management of the Reserve.

Immediate Objective Indicators

57. Development objectives, those things that the project will *contribute towards*, are best assessed independently of the project and at portfolio level. However, the Immediate Objective is something that the project is trying to achieve *in its lifetime* or shortly thereafter, and is a key element in the M&E framework because it defines the project's target. In the case of the Gulf of Mannar Project, the revised logframe contains three indicators for the "Objective" of which only one has been achieved (see [Annex IV](#)).

²¹ **State Government comment:** IR 10 crores [100 million] sanctioned for 2013-2016 – 4 years @ 2.5 crores/year [25 million/year] and an amount of IR 48 lakhs [4.834 million] sanctioned for the period of Jan to Mr 2013 has been approved. **TET response:** While the State Government's sanctioning of IR 4.834 million and IR 100 million are creditable sums to be funding the Trust to, these equal just US\$ 89,520 and US\$ 1.852 million respectively – a total of US\$ 1.94 million but still less than half of the US\$ 4 million that the State Government agreed contractually in the Project Document to provide to the Long Term Funding Mechanism.

- Enhanced coral cover by 10%
 - Total increase in live coral cover between 2003 and 2012 is 2.2%²².

Although this figure falls far below the target, the headline figure does not tell the whole story since the area was subject to a coral bleaching event in 2010 (see paragraph 78).

- Enhanced dugong sightings in Appa Island (5 sightings per week) and also similar sightings in the nearby islands of Keezhakkarai coast
 - No quantitative data is available²³.

Troublingly, no formal baseline or monitoring surveys have been instigated for what is the conservation flagship species of the Marine National Park. The only information appears to come from fishermen on an *ad hoc* basis, from encounters (usually with dead animals) by the MNP staff or fisheries patrols. Anecdotal reports through the VMCEDCs suggest an increase in sightings. The increase in the encounter rate with dugong carcasses is suggested to be a sign of an increase in the overall population, but the opposite would appear just as likely to be the case.

- Fish production improved by 5%
 - A 7.83% rise in total fish landings (artisanal and mechanised) from 2008/9 to 2011/12.

This is a poor indicator because it does not take into account changes in the total fishing effort. However, a ban on new registrations of bottom-trawlers in all State ports has meant that although replacement boats may be registered, the total number of active boats is assumed to be the same (but see paragraph 62) thereby suggesting a constant level of effort over the period. However, the trend in the number of artisanal boats is unknown.

Effectiveness

Review of Outcomes to Impacts

58. Table 8 provides a review of the likelihood of outcomes being translated into intended impacts using the recently-introduced methodology described in paragraph 7 and Tables 3 and 4.

²² **State Government comment:** *Reference required – for scientific reporting it is not the right way to calculate the overall percentage of increased live coral cover every year. In 2010 the elevated SST had caused severe bleaching (9% reduction in live coral cover) bringing down the live percentage cover of corals. Percentage cover has to be documented every year and current figure stands at 37.79 for 2012 – Figure 6. TET response:* The TET notes that this same nonsense has been provided in the comments made by SDMRI and respectfully points out to the State Government that it has been misled by its supposed scientific adviser. The GEF Objective performance indicator (#1 in Annex IV) has a target of 10% increase in live coral cover over the baseline figure – nowhere does the TET say anything about a year-on-year change. The baseline figure has been taken as 36.98% - as per figures provided by SDMRI. The final figure for the project in 2012 was given by the same source as 37.79%, that is an increase of 0.81% over the lifetime of the project. 0.81 as a percentage of the baseline figure of 36.98 represents an increase over the baseline of 2.19% which we have rounded up to 2.2%. Full details of the changes and the reasons for these are laid out in paragraph 78 along with a graph of the data provided by SDMRI.

²³ **State Government comment:** See footnote #41 in paragraph 95.

TABLE 8: REVIEW OF OUTCOMES TO IMPACTS AT THE END OF PROJECT SITUATION

Component	Findings	Review of Outcomes to Impacts
Site Level Outcomes		
Output 1: Project Management Streamlined, Trust strengthened for greater coordination with all stakeholders, and long term sustainability mechanisms operational	The GoMBRTrust has been established but has not been configured as the apex decision-making body originally envisaged and has no statutory powers. No Long-term Funding Mechanism was established although the GoTN has agreed to fund the Trust to continue to undertake a series of restricted activities until 2017. A coordination mechanism has been put in place through a series of committees but these lack any statutory recognition and no hard evidence is available that they have achieved anything. Thus it is debateable whether the intended outcome was delivered, but if it is given the benefit of the doubt there is a specific allocation of responsibilities, and the measures designed to move towards intermediate states have started but have not yet produced results.	AC: Moderately Likely (but with reservations)
Output 2: National Park management strengthened	A management plan has been prepared for the period 2007-2016 but it has significant limitations, does not appear to have been implemented, and the planned updates every three-years do not appear to have occurred. Staff have been recruited and trained, largely in the identification of scheduled species for enforcement purposes. No other management activities evident. Awareness of the National Park has been raised. The project's intended outcomes were delivered and designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding, especially for the management plan. While the measures designed to move towards intermediate states have started and have produced results, they give no indication that they can progress towards the intended long term impact.	BB: Likely
Output 3: National Park infrastructure strengthened	Demarcation of the boundaries of the National Park has not occurred (but is still proposed for 2013), neither has the construction of watch towers, but Anti-poaching Watchers have been employed and huts built for them. Patrol speedboats have been purchased and deployed and produced results. In cases where the intended outcomes were delivered, they were designed to feed into a continuing process, with specific allocation of responsibilities after project funding. Furthermore, these measures (patrolling) have started to produce results, which clearly indicate that they can progress towards the intended long term impact.	AA: Highly Likely
Output 4: Protocols for monitoring coastal and marine biodiversity developed	Inventory of species made and baseline data on some of the key taxa have been collected. Restoration of coral reefs has begun, but not really on any other key benthic habitats. Some increase in enforcement procedures although no evidence of control of pollution. The project's intended outcomes have been partially delivered, but have not been designed to feed into a continuing process after project funding.	C: Unlikely

Component	Findings	Review of Outcomes to Impacts
Output 5: Sustainable alternative livelihoods created and demonstrated	Micro-credit financing provided to 1,905 self-help groups; vocational training undertaken for 1,914 people; extra school tuition provided to fisher communities' children at crucial exam times; sustainable development improvements made in 200 villages. With the exception of the micro-credit system, the project's intended outcomes were delivered, but were not designed to feed into a continuing process after project funding. However, the micro-credit system was designed to feed into a continuing process, with specific allocation of responsibilities after project funding and the measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.	C: Unlikely AA+: Highly Likely (micro-credit only)

As a result of the review of outcomes to impacts (ROTI), the overall likelihood of impacts being achieved is one case each of Highly Likely, Likely, Moderately Likely, and two of Unlikely, hence the Project has achieved most of its major objectives, and yielded some excellent products, but is not expected to yield some of its global environment benefits, hence it is evaluated as **Moderately Satisfactory**.

Impact

59. Although not within the capability of the TET to verify independently, there is some indication that the ecological status of coral reefs is improving with both increases in actual coral area from restoration work (3.9%%) and from the proportion of live coral cover on existing reefs (2.2% despite a coral bleaching episode in 2010 (see indicator #1 in [Annex IV](#) and paragraph 78)) attributed to a cessation of bottom-trawling and other damaging fishing practices within the Marine National Park. This ban on bottom-trawling, which actually extends to the area between the coast and the offshore islands, arguably instigated by the Project through the GoMBR Trust, has demonstrably reduced the stress on the this part of the marine environment. When coupled with a ban on people landing on the 21 islands of the Marine National Park and therefore the associated collection of sea cucumbers and seaweed from the surrounding shallows, some of the key threats have been reduced. It would be good to report that they have been removed but illegal collection continues although in the presence of the anti-poaching watchers and the new high-speed patrol boats, such incidences are reducing rapidly. Stress has also been stabilised, if not reduced, by a prohibition of new registrations for bottom-trawlers in local ports. While this extends throughout the State, the Trust was one of those that lobbied hard for this measure to be adopted – bottom-trawlers may be replaced but the prohibition caps the total number operating. Possibly as a result of these measures, although the evidence is at best circumstantial at present, fish landings have increased by 7.8% over a three-year period while catch effort is assumed to have stabilised – see indicator #3 [Annex IV](#). While not yet able to demonstrate a reduction in stress, the Project has made considerable progress in some of its long-term aims of reducing the number of fishermen's children from following their fathers into fishing by improving educational and vocational opportunities, as well as raising families' incomes through access to credit and subsidiary economic development, thereby removing their dependence on diminishing marine resources.

ACHIEVEMENT OF PROJECT OUTPUTS

60. This section provides an overview of the main achievements of the Project. It is not intended to be a comprehensive account. The following paragraphs have been based heavily upon a list of bullet points of key activities undertaken by the Project supplied to the TET by the UNDP Programme Specialist – Deepak Samuel – and Programme Analyst – Lianchawii Chhakchhuak – in response to a request from the TET for a summary of activities undertaken. The TET acknowledges the work of all involved and thanks them and UNDP for their kind assistance.

TABLE 9: EVALUATION OF THE END OF PROJECT SITUATION AS PER THE REVISED LOGFRAME

Outputs		Evaluation*					
		HS	S	MS	MU	U	HU
Output 1:	Project Management Streamlined, Trust strengthened for greater coordination with all stakeholders, and long term sustainability mechanisms operational						
Output 2:	National Park management strengthened						
Output 3:	National Park infrastructure strengthened						
Output 4:	Protocols for monitoring coastal and marine biodiversity developed						
Output 5:	Sustainable alternative livelihoods created and demonstrated						

* Note: HS = Highly satisfactory; S = Satisfactory; MS = Marginally satisfactory; MU= Marginally unsatisfactory; U = Unsatisfactory; HU = Highly unsatisfactory. Components are hyperlinked to relevant section.

The Project has been implemented with a deliberate disproportionate bias towards locally-based development activities and with a greater emphasis on protection than on conservation. Policy and institutional reform has been largely ignored. Project outputs are ranked individually from Highly Satisfactory to Marginally Unsatisfactory with the mode being Marginally Satisfactory, hence overall the achievement of outputs and activities is evaluated as **Marginally Satisfactory**.

Output 1: Project management streamlined, Trust strengthened for greater coordination with all stakeholders, and long term sustainability mechanisms operational

61. The Gulf of Mannar Biosphere Reserve Trust was declared by government order on 19th December 2000 (G.O. Ms.263 E&F Department (FR-V)), and was registered as a Society under the Tamil Nadu Registration of Societies Act 1975 on 23rd February 2001. It is governed by a Board of Trustees which has the Chief Secretary of the Tamil Nadu Government as its Chair. The Trust has acted as the Project Coordination Unit throughout, and has provided secretariat services to the five coordination committees set up within its purview to coordinate management actions within the Biosphere Reserve at various levels. These are:

- Board of Trustees [20 members];
- State-level Coordinating Committee [14];
- Empowered Sub-Committee [10]; and
- District-level Coordinating Committees (DLCC) – two committees to cover Ramanathapuram and Thuthukudi Districts [21 members each].

Full details of the membership of these committees are provided in Annexes VII and VIII. All but the DLCCs are supposed to meet twice a year and the DLCCs six times, but records of these meetings shows that meetings were less frequent and this frequency is declining (see Table 10). While the TET agrees with the UNDP-CO’s assertion that the creation of the Trust was “*itself a milestone achievement*” in moving away from “*typical sectoral planning frameworks*”, the Project has paid little attention to strengthening the Trust to increase its management and coordination role, probably as a result of a decision taken during the first Board of Trustees meeting in August 2002 when the Project was re-oriented towards development, and simple actions, such as combining the roles of Trust Director with that of the Director of the Biosphere Reserve as suggested by the MTE and UNDP have not taken place. It has taken until 2013 before the Trust Director has been included as a member of the Gulf of Mannar Biosphere Reserve Committee, by the Forest Department; and while the TET understands that a letter has been sent by the Principal Secretary, Forest Department to the heads of other relevant departments such as the State Pollution Control Board, to include the Trust Director as a member, as the 2012 PIR notes, “*The responses are currently awaited*”²⁴. The TET wonders why after 10 years of Project implementation, such basic improvements in coordination and streamlining are still outstanding. As the 2011 PIR states:

²⁴ **State Government comment:** *Inclusion of Trust Director as a member/ invitee etc. in some important related bodies like CRZ, TNPCB etc. will be examined.*

“... achieving the project objectives is largely dependent on strong coordination among line departments in enforcing the existing legislations and other related frameworks on marine resource conservation. Some of the recommendations of the mid-term review to help bring about the desired objectives were not agreed upon by the State Government, thus reflecting the limitations of the project in attempting to strengthen coordination among departments. These issues relate to a) setting up of the GoM Biosphere Reserve Authority, to coordinate with different line departments, b) full integration of the National Park into the management and integration of the Biosphere Reserve, etc.”.

TABLE 10: NUMBER OF MEETINGS HELD BY COORDINATION COMMITTEES BY YEAR

	Prescribed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
BoT	2	1	-	2	1	1	-	1	1	1	1	-	1
ESC	2	-	-	-	2	2	2	4	2	2	-	-	-
SLCC	2	-	-	-	-	1	2	-	1	1	1	-	-
DLCC*	6	No details available									4	2	-

*Two DLCCS should meet six times a year each. Figures are for each committee.

62. Similarly, the Project has paid little attention to amending the policy framework to strengthen conservation within the Biosphere Reserve. The 2010 PIR makes it clear that:

“... the project’s attention and resources have been disproportionately expended on implementing local level activities livelihood support, awareness raising and community mobilization activities and other field level activities. While these are important ... it is now recommended to concentrate its efforts towards strengthening the institutional structure and support for GoMBR management and upstream policy activities such as review and amendment of sectoral (and economic) policies to mainstream biodiversity conservation as many threats to marine biodiversity conservation are as a result of individual sectors pursuing their own development agenda without sufficient consideration of the full range of impacts on either the environment or on different production sectors, including possibly their own in the long run.”

This has still not happened and even a basic review of policies, their interactions, and their impact upon the Biosphere Reserve was never undertaken. Some policies have been introduced that promote conservation in the Reserve but only one appears to be related directly to Project actions – that of introducing a seasonal ban on the collection of seaweed between 1st March and 15th May each year. The genesis of the ban on bottom trawling between the coast and the islands is unclear but appears to have arisen as a result of increasing conflict between the artisanal fishermen and those using mechanical trawlers. The State-wide ban on new registrations of trawlers has stabilised the theoretical number of boats active in the Gulf of Mannar, although a loophole has allowed the illegal operation of boats of the same name to operate from nearby ports but under a single registration. A recent national requirement for all trawlers to be registered online, for security reasons, has had the side-effect of blocking this loophole. Finally, in response to the State-wide recognition of falling fish stocks, the State Government has also introduced a policy whereby fishermen will receive a subsidy to convert bottom trawlers to long-line boats to exploit offshore stocks; but again this is a response to a wider problem rather than being something derived from the Project.

63. The Project has also failed to capitalise the Long Term Funding Mechanism for the Trust as laid out in three clear steps in paragraph 35 of the Project Document, thus:

“Step 1: The project will provide the technical expertise to conduct a feasibility study and establish the operational structure of the LTFM itself, including appointment of trustees, eligibility criteria for grantees, disbursement procedures, reporting requirements, and asset management arrangements. This support would be provided based upon the lessons learned from the GEF Evaluation of Conservation Trust Funds. The study would then be submitted to the Governments of India and Tamil Nadu and to UNDP/GEF for endorsement. Step 2: The LTFM would be legally established and capitalized. The capitalization would be tranced, with the first tranche being a disbursement of US\$ 500,000 of GEF resources only after the equivalent of US\$ 2 million in co-financing had been deposited to the mechanism. Step 3: Co-financing of the

mechanism would proceed on a 1:4 basis, with US\$ 100,000 being deposited in the mechanism for every US\$ 400,000 of co-financing deposited until the mechanism is capitalized to US\$ 5,000,000. Steps 2 and 3 will be looked into as part of the feasibility study.”

The issue appears to have become confused, first with money released by UNDP pre-Project, and then with capitalisation of the corpus fund for the micro-credit system used by the VMCEDCs. According to the minutes of the PSC meeting of 7th December 2011, the UNDP contribution of US\$ 1 million was released pre-project during 1998-2002 to MSSRF and the DHAN Foundation “to build assets for the local communities and for preparation of the Project Document” and that “If the US\$ 1 million was given by UNDP to MSSRF and the DHAN Foundation, a report on their work must be furnished to the State Government and the issue clarified”. This seems to be confused since the Project Document was completed in 1998. Furthermore, GEF contributed US\$1 million to the corpus fund which has been extended as micro credit to the VMDEDCs almost certainly because of the absence of the LTFM at the time. The feasibility study outlined in the above quote to be undertaken as the first step in the process was not undertaken until at least 2011 (minutes of the Board of Trustees meeting dated 22nd August 2011 refers to a study undertaken by an NGO called FERAL being submitted) and this appears to have been rejected as lacking a sound business plan at the PSC meeting in December 2011. Interviews during the TET with senior officials suggest that the US\$ 4 million cash financing that the State Government signed up to provide for this mechanism was not provided because the US\$ 1 million provided by UNDP-GEF was not done in a way that met the State Treasury’s rules for such funding. The TET believes this to be a smokescreen – if the political will was really there for the State Government to fulfil its obligations in respect of this fund then any problems working contrary to this could have been articulated to the UNDP-CO many years before and a compromise or a solution worked out. That confusion and ambiguity remains at the end of the Project over what is a very clear commitment in the Project Document says much about the credibility of such problems and speaks volumes about the State Government’s lack of intent²⁵.

This output has achieved only a few of its major objectives, and even then with major shortcomings, hence it is evaluated as **Moderately Unsatisfactory**.

Output 2: National Park management strengthened

64. A management plan entitled *Integrated Management Plan for the Gulf of Mannar Marine National Park and Biosphere Reserve (2007-2016)* was prepared under the auspices of the Project. A management plan should be a living document; referred to daily, updated as tasks are completed, reviewed and revised regularly (the Lead Evaluator has seen ones that are computerised to facilitate active management). Tellingly, this is not the case here. In section 6.3 the Plan states that:

“It is suggested the implementation and activities of the 10 Year Management Plan be reviewed at an interval of three years and corrective measures included for implementation for the next three years phase.”

Also tellingly, it appears that the original version was incomplete since in the Acknowledgement it states:

“For any management plan, the baseline document is vital to further prepare and implement suitable strategies. Accordingly, it was observed that the original draft management plan submitted by WII [Wildlife Institute of India] during 2007 has many gap areas and hence a thorough revision was suggested by Principal Chief Conservator

²⁵ **State Government comment:** *In the Terminal Evaluation report it is pointed out that no Long Term Financing Mechanism capitalized to ensure independent funding of Trust’s future activities. But, the Government of Tamil Nadu have sanctioned Rupees 48.34 lakhs (4.834 million) for the period Jan 2013-March 2013 and Rupees 10 crores [= 100 million] for continuing the activities of the Trust from 2013-2017. Government of Tamil Nadu will not abandon this project but will continue to fund the Trust. TET response: While the State Government’s sanctioning of IR 4.834 million and IR 100 million are creditable sums to be funding the Trust to, these equals just US\$ 89,520 and US\$ 1.852 million respectively – a total of US\$ 1.94 million but still less than half of the US\$ 4 million that the State Government agreed contractually in the Project Document to provide to the Long Term Funding Mechanism. Furthermore, such funding was designed to ensure that the Trust would be independent of the Government both financially and politically – something that is now impossible.*

of Forests and Chief Wildlife Warden to incorporate all up-to-date available scientific data.”

and the final version is dated 31st August 2010. So, although the scientific details have been revised and gaps filled since the 2007 original, things like the costed work plans for 2006 to 2009 which by 2010 had no purpose in an active management plan were retained. This exemplifies the thrust of this Plan as being a repository of information to take off the shelf for reference, rather than being a plan to guide the active management of the reserve. In brief, the Plan is poor and does not reach international standards. It is a great pity that an expert in management planning was not contracted to guide the process rather than it being led by senior FD personnel assisted by academics. The descriptions and analyses, particularly the scientific details, are first class but overly long, while the planning details – prescriptions of management actions required, prioritisation, allocation of responsibilities, breakdown of costs, etc. – are poor or absent. There is no framework provided for annual, quarterly, monthly or weekly work plans to be derived. Notably, there are no species conservation or recovery plans (see paragraph 95 *et seq.*). Although a TE Report is not the place for a detailed technical review, some examples are called for.

65. The Plan comprises six chapters divided into two parts. The first three, covering the background to the Plan, an inventory of the biodiversity, and a history of the Reserve, are thorough and detailed comprising extensive factual information. Chapter 4 attempts to provide a set of prescriptions for actions, listing a total of 24 key considerations for improving the management of the Reserve. While this list is fairly comprehensive covering infrastructure, equipment, training, and staffing, the prescriptions are little more than justifications and provide no details of how actions will be achieved. For example, under prescription #19 *Providing alternative employment for rehabilitation of the offenders and old coral miners* the prescription reads:

“As police department, the offenders will be diverted to other alternative employment. The necessary arrangements for the alternative employment through EDC have to be provided. The habitual offenders will be monitored not to do the same smuggling business and diverted to other than smuggling business for which the list will be collected by the Range officer. The seas weed collectors and coral smugglers will be identified and provided with alternative employment.” [sic]

However, the remaining 119 pages of the chapter (almost half of the entire section of Part 1 (Chapters 1-4) comprises a thoroughly detailed scientific treatise on the restoration measures necessary on the 21 islands for coral reefs, sea grass, and mangroves, with maps, baseline data, threats, and what reads like a manual of the measures needed to achieve the restoration. Similar levels of detail are provided for actions to eradicate terrestrial and marine invasive alien species, followed by very brief sections on recovery plans for key species, e.g. sea horses and holothurians.

66. Part 2 of the Management Plan should provide the real meat of the plan in the form of detailed prescriptions, actions, timings, and budgets, yet the main bulk of the prescriptive section found in Chapter 5 is weak. For example, there is a very good analysis on the forms and effects of point source pollution arising from land-based activities adjacent to the Gulf, however the suggestions for controlling it are imprecise and lack any indication of prioritisation, responsibility, proposed timing, or funding, e.g.

“#1. A policy level decision to ban untreated industrial pollutants and sewage release into the Gulf of Mannar Biosphere Reserve is proposed to be taken up with the State Pollution Control Board.”²⁶

²⁶ **State Government comment:** *This issue has to be jointly addressed with the Tamil Nadu Pollution Control Board. As regards to pollutant discharges, the Tuticorin Corporation is planning to set up treatment plants for the domestic untreated sewage as a measure of avoiding pollutants from entering into the Gulf. TET response:* Why? Why does it still have to be jointly addressed with the Tamil Nadu Pollution Control Board? The Project has had 10 years in which to address it with the Pollution Control Board and if the Trust was actually functioning effectively as a coordination body, then when it was writing the Integrated Management Plan this should have been addressed properly at that time. But then the Trust Director was not and still is not a member of said Board and, despite the State Government’s insistence that the structure of the Trust and its coordination function is an effective model, the evidence continues to suggest otherwise.

#6. *The acid wash from shell craft industries, solid and waste water from ice factories and sea food processing centres are now considered as localized pollutants in Gulf of Mannar areas, however, these pollutants may become a major one if no regulation on such kind of industries and their waste discharges.*

The same is true with a section on trade in protected species – excellent analysis, poor prescription. Under the management of sea grass section, the Plan notes that “*Dugong conservation is nothing but sea grass habitat conservation in the Gulf of Mannar Biosphere Reserve.*” and provides seven prescriptions:

1. *No baseline data is available at present in the region between [Thuthukudi] and Kanyakumari*
2. *A detailed mapping of sea grass beds with the information on status of each species in the Biosphere Reserve is needs to be prepared using latest satellite imageries.*
3. *Prevent the further decline of sea grass beds by eliminating the causes of decline such as pollution, indiscriminate fishing etc.*
4. *Extending the present sea grass distributional limit to the historical distributional limit.*
5. *Prohibition of trawling fishing on the sea grass beds.*
6. *Awareness programme in the catchment area regarding the excessive use of pesticide and other chemicals and its impact.*
7. *Restoration experiments with the help of Research Institutions using suitable low-tech cum low-cost techniques such as Sprigs (quadrate) method ...”*

but absolutely no details on how any of these things may actually be achieved. It suggests a number of research institutes for assessing, restoring, and monitoring sea grass but provides no links as to how any of this is going to happen. For example, just how is a research institution going to lead the moves to prohibit trawling on the sea grass beds? Where will it derive its authority from? What priority should be given to this action over the other six listed? Over what period will this take place?

67. And so it goes on. Under the section on *Interpretation, education, eco-tourism and visitor management*, there are 26 pages of illustrated tourist attraction that read like a guidebook but have no place in a management plan; there are pages and pages of tables of statistics on fishing villages; a fully formed eco-development plan complete with logframe (but no indicators) embedded in Chapter 5 where again it has no place. And then curiously there are sections containing a detailed costed annual workplan for the Trust for 2006 and tables of highlights of achievements of work completed (note the past tense) or with costings in 2007-09 to no perceivable purpose. Tentative work plans are given for 2011 and 2012 but these are structured according to the GEF Project’s logframe and bear no relation to the activities necessary to meet the management prescriptions and objectives described in the Plan. Chapter 6 provides details on policy, administration, evaluation and review and interestingly a summary table of management activities with an outline schedule for work, but in most cases activities are scheduled to place in each and every year.

68. Finally, it is clear from even the rudimentary prescriptions contained within the Plan that it will require considerable financial resources to implement. It is a great pity therefore that one of the central concepts of the Project, that of the Long Term Funding Mechanism, which was designed to provide a sustainable and independent source of funds to the Trust to facilitate management, was not capitalised by the State Government according to the intentions outlined in the Project Document. This is especially the case now that even the initial budget for the Trust of IRs 100 million (US\$ 1.85 million) over four years (2013-2016) sanctioned by the Government through its Order #265 of 16th November 2012 has been reduced and activities restricted to research and awareness raising through a letter from the Additional Chief Secretary dated 14th December 2012 (see paragraph 88).

69. The Trust has engaged a total of 33 Anti-poaching Watchers to carry out round-the-clock surveillance on the 21 islands of the National Park to alert the enforcement authorities to illegal activities. While their engagement is a positive move, the TET notes that there are insufficient of them to actually achieve 24 hour coverage on every island (even assuming 12-hour shifts and only one

watcher per shift, which would still require 42 watchers²⁷). The TET also noted during interviews with some watchers that they are simply deployed by boat onto an island for 2-3 days at a time, with food and water but without any means to communicate with the authorities to whom they are supposed to be assisting, nor any means to contact the Trust/FD in case of emergency illness or accident. This appears to be negligent. The TET raised the issue with the Wildlife Warden and recommended that the watchers be provided with something even as basic as a mobile phone (assuming coverage is available) to enhance communications. Interviews indicated that the Watchers were dedicated and as efficient as their current circumstances could be. Furthermore, having been recruited from the local fisher communities, they assert that they have also raised awareness among their communities of the importance of conservation of the marine resources, especially around the coral islands as they are the life support system for most of the fisheries' resources.

70. A Marine Biologist has been engaged within the office of the Wildlife Warden. Interviews suggested that his services have not been put to effective use. He will be of great value in obtaining information for further conservation work to be carried out by the Trust and should be facilitated to advise and guide the Trust with regard to future research programmes and appropriate information collection. The old laboratory and museum once maintained by the Fisheries Department on Kurusadai Island are now dilapidated from lack of maintenance, yet the specimens preserved there remain valuable and much of the equipment remains serviceable. These assets should be repaired and maintained.

71. A number of study visits were arranged to the Andaman, Nicobar, and Lakshadweep Islands for technical officials of the Trust to learn more about marine protected area management, coral reef management, and eco-tourism. Interviews indicated that those concerned had gained knowledge helpful to their roles. One of the tangible benefits of these visits is said to be the Interpretation Centre at Kunthukal (see paragraph 75). Study visits were also arranged to other Biosphere Reserves and protected areas within Tamil Nadu or adjacent states, e.g. to Kalakkadu Mundanthurai Tiger Reserve, for field officials and community leaders. In addition to learning more about the reasons and activities behind conservation work, it said that these visits brought about a change in the mind set of the primary stakeholders, removing their mistrust and misunderstandings on the objectives of the Project thereby encouraging participation and engagement.

72. The Project raised awareness of marine conservation issues through a variety of means and claims to have reached nearly 100,000 people in all 248 VMCEDCs formed (see paragraph 80). A number of awareness programmes were created for school children in the form of brochures, posters and sign boards. During the non-fishing season, intense awareness campaigns are carried out in different fishing villages through street plays/theatres. The latter were largely carried to by the Arumbugal Trust which was successful not only in reaching the coastal communities but some of those of the adjacent hinterland as well. Details of these programmes are given in Table 11. A documentary film, *Healing Troubled Waters*, about the activities of the Trust has also been made and shown widely. It appears that these activities have had a significant impact on the local communities. In interviews the TET certainly found that they responded convincingly and were aware of the conservation measures and rules they need to adopt and what responsibilities they had in conserving marine resources. Perhaps the most graphic result of the awareness-raising work has been the cessation of coral mining on the islands. Prior to the Project mining of coral took place for building material, cement, and fertilizer. Although such mining was banned after designation of the Marine National Park in 1986, it still occurred illegally. Since the Trust started implementing conservation activities, the degree reduced and ceased completely in 2005 when the implications of coastal protection were brought home forcefully by the 2004 tsunami. A ban on seaweed collection, which is carried out mainly by women, has been enforced between 1st March and 15th May each year to ensure a sustainable growth and harvesting of seaweeds. Although still flouted in places, increased awareness

²⁷ **State Government comment:** 2 islands are sunk and hence APWs should be 38 in number – the mere presence of the APWs in the island or patrolling near the island itself sends a warning signal to criminals involved in harvesting/marketing of scheduled marine species. Most of the APWs have mobile phones and report incidents/information to the Foresters who in turn report to the Rangers almost every day. **TET response:** The assertion that “most of the APWs have mobile phones” is directly contrary to what the APWs interviews told the TET and which is reported in the paragraph.

and targeted livelihood programmes are reducing incidents of illegal collection. Similarly, State-wide bans on other fishing gear and methods, such as ring seines, shore seines, push nets (thallumadi), pair trawling (a large trawl operated between two similar-powered mechanised boats) and dynamite fishing are all still used illegally in the Biosphere Reserve, but the number of incidents is falling despite (or more likely because of) increased surveillance (see paragraph 74).²⁸

TABLE 11: AWARENESS PROGRAMME CONDUCTED BY ARUMBUGAL TRUST

Year	Place	Programmes	Participants
2007 to 09	Schools and Colleges in Ramnad & Thuthukudi districts	16	2,111
2010	Schools and Colleges Ramnad and Thuthukudi districts	40	17,442
2011	Schools and Colleges Ramnad and Thuthukudi districts	67	31,157
2012	Schools, Colleges, NSS, NCC, Ramnad and Thuthukudi districts	46	23,051
2012	VMCEDC, Villages in Ramnad and Thuthukudi districts	88	22,913
Total		257	96,674

SOURCE: GoMBRT.

This output has achieved many of its major objectives, and yielded some excellent products, but displays significant shortcomings and has not yielded some of the expected global environment benefits, hence it is evaluated as **Moderately Satisfactory**.

Output 3: National Park infrastructure strengthened

73. A contract was awarded to a vendor in 2007 to provide and install 326 buoys to mark the periphery boundary line 500m offshore from each of the 21 islands that represent the boundary of the Core Zone. The installation was supposed to be completed within three months of signing the contract. However, due to internal problems with the technicalities of the tender, delays ensued. The first 110 buoys were delivered but had to be stored because of protests from the fisher unions who opposed their deployment, followed by yet further delays caused by the sensitivity of the issue impacting local elections. Full deployment has still not taken place. The Trust has received help from the State Forest Minister who met the fisher unions in 2010 and tried to impress upon them the need for installing the buoys and how it could benefit them. Some buoys were installed in 2012 but 24 disappeared and were thought to have floated away on the strong currents, but vandalism has still not been ruled out²⁹. New technical specifications to increase the weight of the anchorage and the chain length have ensued. A large claim for compensation has been received from the vendor for delays and storage charges. The buoys have now been moved to buildings owned by the office of the Wildlife Warden, but the claim for compensation has not yet been settled. The UNDP-CO has retained money from the Project to fund deployment of the buoys, now said to be planned for mid-2013³⁰.

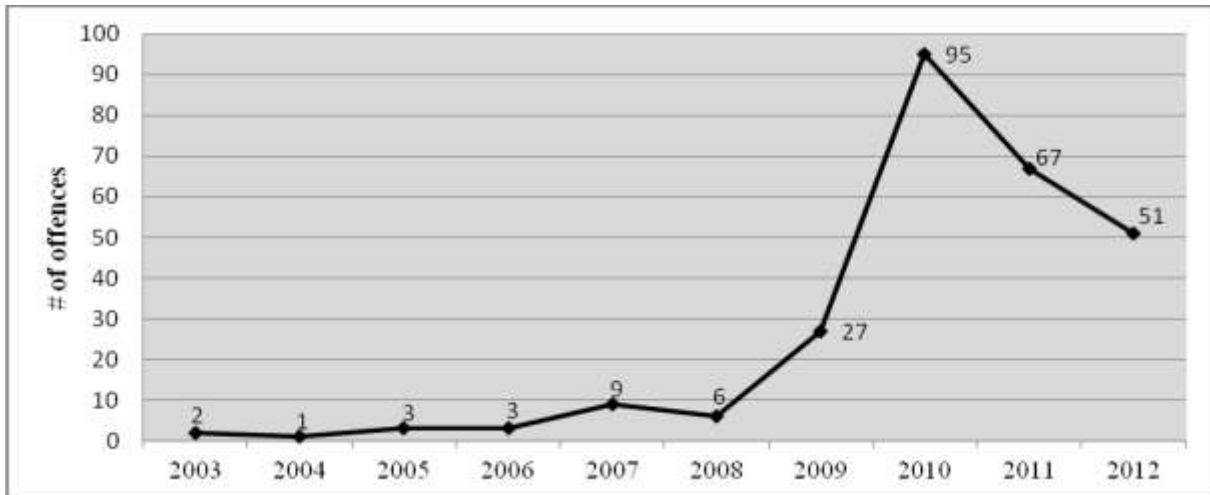
²⁸ **State Government comment:** *This is a confirmatory note pointed out by the TET contradicting on the “logo” and Core theme” issue as mentioned in paragraph 24. **TET response:** Actually it is not contradictory. The changes in awareness have not been brought about by the use of just the logo but by many means as described in this paragraph. “Branding” is just one of a range of tools used in marketing. The TET maintains that with better “branding” and a simpler, more friendly logo, greater reach and inclusiveness (by way of people wanting to be involved rather than responding to doing something because they have been told to do it) would have been greater.*

²⁹ **State Government comment:** *13 of the 24 floats have been discovered and handed over to the Wildlife Warden by the Ranger controlling Tuticorin region. Moreover, the Wildlife Warden of the Marine National Park with technical expertise from NIOT Chennai have successfully deployed 5 buoys around the Vembar group of islands with increased anchorage weight and better mooring chains on a pilot scale. This was carried out during mid-April 2013 (post TET mission). The Government also provided a large table of facts including coordinates for each of the five buoys which are not relevant to this evaluation. The UNDP-CO has this on file should any reader wish to see it.*

³⁰ **State Government comment:** *The buoys purchased by UNDP-GEF were not deployed for 2 major reasons viz. 1. Technically weak sinkers that get drifted away when winds are strong or while the water currents are fast and 2. Opposition from the fishing communities in Tuticorin district of the project area. A total of 350 buoys were purchased and 24 were deployed around Vaan island of Tuticorin. The buoys disappeared in a very short period and 13 have been recovered. National Institute of Ocean Technology (NIOT), Chennai has provided the technical expertise and has increased the weight of the sinkers from 200 Kgs to 1000 Kgs (1 ton). The experimental deployment was carried out in the Vembar group of islands by fixing 5 marker buoys. The study is being carried out for 2 months and once the report on feasibility is submitted, deployment of buoys in the remaining island groups will be carried out.*

74. Three fibreglass speedboats (with twin 150bhp outboard engines) have been purchased and deployed for use as main open water patrols since 2009 along with two vallams (30ft, inboard diesel engine, traditional, shallow draught wooden craft) that have been deployed for inshore work around islands. These, the deployment of Anti-poaching watchers, and joint patrols conducted with other agencies such as the Fisheries Department and the Coastguard within the 550 km² of the Core Area (Marine National Park) have resulted in a significant increase in the number of violators caught and prosecuted. However, after a steep rise (see Figure 2), the number is now declining as increased awareness of the need for conservation and increased enforcement measures begin to have the desired effect.

FIGURE 2: NUMBER OF OFFENCES ENCOUNTERED BY THE AUTHORITIES WITHIN THE MARINE NATIONAL PARK

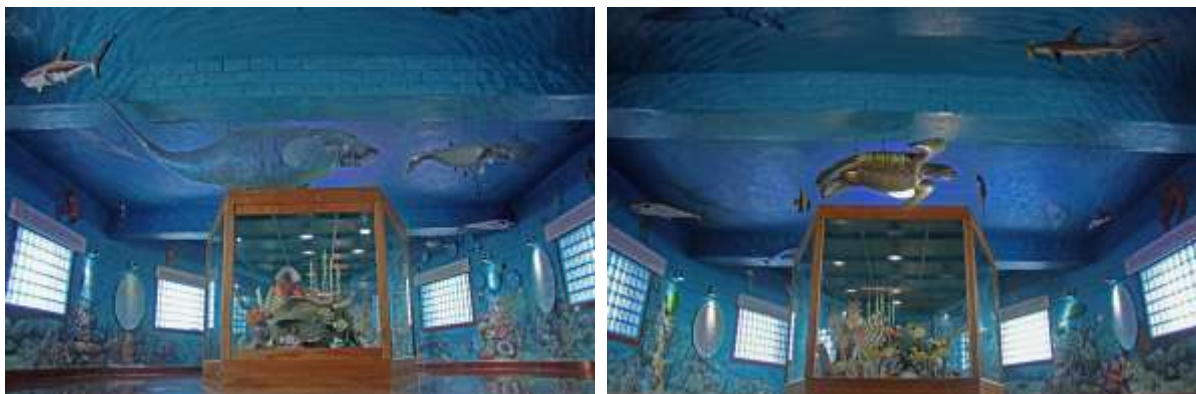


SOURCE: Forest Department Wildlife Warden.

75. A number of improvements have been made to the built infrastructure of the Park, thus:

- **Interpretation Centre:** an interpretation centre has been constructed at Kunthukal adjacent to the Vivekananda Memorial Hall visited by large numbers of tourists, and close to a jetty where boat rides can be taken. Construction started in 2011 and was completed in November 2012. It is reported that it has received 400 visitors a day since it opened in January 2013. The Centre is very impressive and is modelled to imitate the marine environment with life-size models of different marine creatures including turtles and a dugong with its young (see Figure 3); plus a number of informative panels providing information on various taxa and marine habitats. The designers are to be congratulated on a striking and memorable piece of work.

FIGURE 3: VIEWS FROM EITHER END OF THE TRUST'S INTERPRETIVE CENTRE AT KUNTHUKAL



Photos © Phillip J. Edwards

- **Anti-poaching shelters:** Three shelters have been built on different islands to provide a base and storage area for the anti-poaching watchers. They are permanent concrete structure which it said will be provided with power shortly through solar cells. It is not known why such simple structures were not built on every island.

- Watchtowers: None of the 21 watchtowers that were expected to be built (see logframe indicator #18, Annex IV) have been. No reason has been provided to the TET. This seems remarkable given it is stated on page 107 of the Management Plan that:

“The watch tower is very essential to find the possible irregularities which may occur in other side of islands”.

- Boat jetties: Two boat jetties have been constructed for boats being used by the conservation staff of the National Park. A semi-permanent jetty constructed with concrete and *Palmyra* planks on the mainland at Kunthukul near the Interpretation Centre, and a semi-permanent one fabricated from *Palmyra* planks and rafts on the beach landing site of Kurusadai Island, where concrete jetties are not allowed. The TET noted that the wooden one on the mainland has already fallen into disrepair (see right-hand side of Figure 4).³¹

FIGURE 4: VIEW OF BOAT JETTY AT KUNTHUKAL



Photos © Phillip J. Edwards

- Fisheries Research Laboratory: The renovation of the old research laboratory building on Kurusadai Island has been completed, but it remains to be re-equipped.

76. Finally, experiments have been conducted over increasing the area of coral reef by establishing artificial reefs on previous sand substrates. Concrete frames (1m x 1m x 0.25m) and fish houses (custom designed from structures used successfully in Fiji) (see Figure 5) have been placed using GPS around Shingle and Vaan Islands. Work was initiated in 2002 with funding from the Ministry of Environment, but the Project provided further funding in 2008 to add 0.5 km² areas at each of the two sites. Further funding from the Forest Department (separate from the Project) has meant that there are now about 3 km² of artificial reefs in the Reserve.

FIGURE 5: CONCRETE FRAME (LEFT) AND FISH HOUSE (RIGHT) USED TO CONSTRUCT ARTIFICIAL REEFS



Photos © J.K.Patterson Edward

³¹ **State Government comment:** *The boat jetties can be repaired by simple means and this will be taken care of by the Wildlife Warden.*

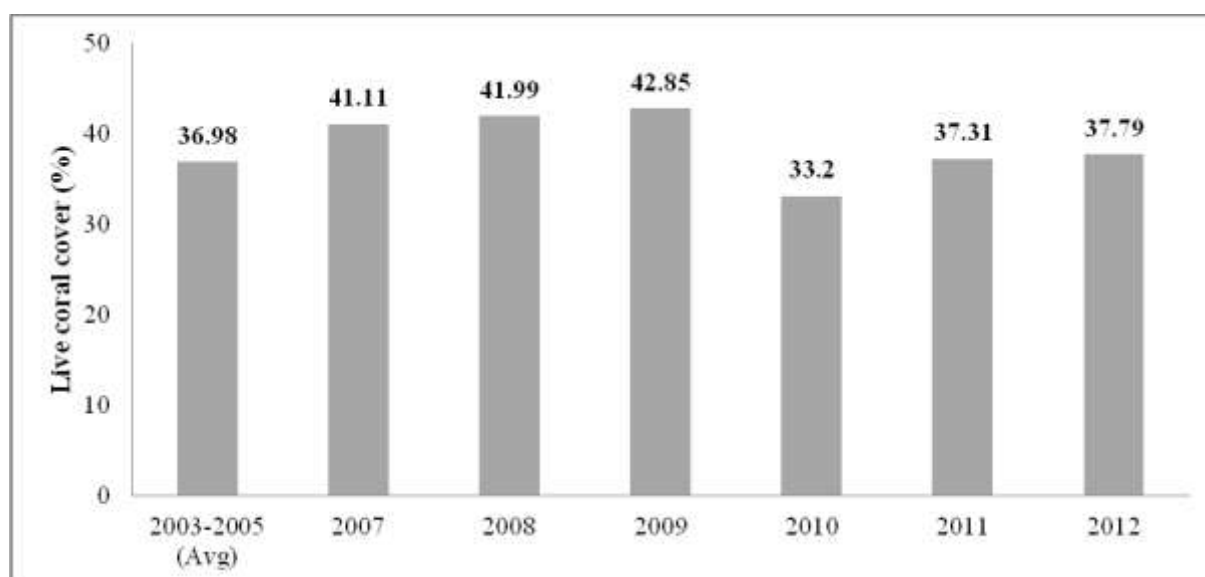
This output has achieved most of its major objectives and yielded satisfactory benefits with only minor shortcomings, hence is evaluated as **Satisfactory**.

Output 4: Protocols for monitoring coastal and marine biodiversity developed

77. The Project has undertaken a great deal of research aimed at improving the baseline data for the Reserve, but has made very little progress in establishing the basic protocols necessary for regular biodiversity monitoring, with the exception of corals. Work to provide a full inventory of species present within the Reserve has resulted in 4,200 species being recorded by 2012 – an increase from the previous baseline of 3,600. Many of these species are microscopic. Although much of this increase is probably a result of increased survey effort, nonetheless the sheer number of species present suggests that although many problems continue to threaten the area, the basic health of the ecosystem is still sound. The only evidence available of biodiversity monitoring within the Reserve has been on coral reefs, yet some of this has been carried out outside the framework of the Project or the Management Plan. Good monitoring protocols have been established at two or three permanent sites on the reefs around each island, and around the artificial reefs where restoration work has been done. This has shown a small increase in live coral cover – see Figure 6 in the next paragraph. A total of 26 research projects were let by the Project between 2006 and 2011 – a full list is provided in Annex X – most directed at determining the status of various taxa or habitats. Twenty research studies have been compiled into a two-volume compilation published by the Trust. Scrutiny of these studies reveals that excellent work has been done and that not all have been pure research; some have been applied. For example, research on seaweed and sea grass has guided appropriate decisions on the regulation of the exploitation of these resources; while studies on microbial organisms have even attempted to find options for alternate livelihoods for local communities. Other publications, some in Tamil, provide capacity building manuals, some for schools; identification guides; general awareness-raising materials; and guidelines to help the VMCEDCs and self-help groups. A full list is given in Annex IX.

78. The most comprehensive monitoring studies have been directed at live coral cover and shown that live coral cover is increasing. Between 2003 and 2009, live coral cover, as measured by standardised survey transects, increased by 5.9%. Prolonged elevated sea temperatures in 2010 then caused widespread coral bleaching resulting in a 9.6% loss in cover. Subsequent recovery has produced a 13.8% increase over the subsequent two years – see Figure 6. This increase is believed to be due in part to the efforts taken by the Trust and the enforcement authorities leading to effective protection measures and increased awareness among local communities on the biodiversity of the region – see minutes of the Tri-partite Review meeting, November 2008.

FIGURE 6: CHANGES IN LIVE CORAL COVER WITHIN THE GULF OF MANNAR MARINE NATIONAL PARK 2003-2012



SOURCE: SDMRI.

This output has achieved many of its major objectives, and yielded some excellent products, but displays significant shortcomings and has not yielded some of the expected global environment benefits, hence it is evaluated as **Moderately Satisfactory**.

Output 5: Sustainable alternative livelihoods created and demonstrated

79. The decision taken during the first meeting of the Board of Trustees in August 2002 to change the Project's implementation strategy to focus on awareness raising and livelihoods development for the coastal village communities has meant that this output has received the most effort over the longest period; hence it has produced the best results. The Project recruited 66 Field Project Workers³² on a contractual basis from the fisher communities to facilitate the formation of Village Marine Conservation and Eco-development Councils (VMCEDCs) and self-help groups, to increase awareness on the principles of conservation, and to gain villagers' confidence with regard to the Trust and its activities. The Field Project Workers note that in the early years this was not always easy and that on occasions they were chased away by villagers throwing stones!

80. The Project has established VMCEDCs in 248 villages within a zone 10km from the coast. These are voluntary groups established and run by the villagers themselves. There is a nominal annual membership fee of IRs 5 and members have to take an oath indicating that they will not undertake activities in a way that is harmful to the environment or illegal in the Reserve. In exchange, they get access to assistance in establishing self-help groups and to micro-finance facilities. The VMCEDC also provides a forum where villagers can come together to exchange ideas, seek advice or help, and through which awareness-raising activities can be organised. In one case at Thangachimadam, five VMCEDCs have got together of their own volition and formed a federation because the village was very large and they needed an apex-body. This has subsequently been able to generate its own income for use within the community. All VMCEDCs took part in a partial self-assessment of the threats their village posed to the Reserve using previously determined criteria. Villages were categorized according to the prevalence of illegal or otherwise unsustainable activities – 107 in the high threat category, 68 medium, 73 low. This enabled the funds available for micro-finance to be prioritised towards the higher threat villages. Four community halls have been constructed in the villages of Thangachimadam, Chinna Erwadi, Kunjarvalasai, and Seeniappa Dharga for village use and by self-groups. These have been extremely well-received by the villages concerned.

81. A total of 2,341 self-help groups have been formed comprising 34,699 members. The Field Project Workers have assisted each group to open a bank account, taught the officers how to operate it, helped to guide loan applications, collected the monthly dues of the revolving fund and the interest thereon, and provided general support to the self-help groups as needed. A corpus fund has been established for each village according to its size and threat category, and groups have been offered loans from this of IRs 60,000 to IRs 150,000 (US\$ 1,100-2,780) per group, each loan offered over a repayment period of 10 months (re-phased if necessary over the non-fishing period) at an interest rate of about 5.5%. Repayments of loans have been at an exceptionally high 99.25%. The corpus funds have recorded a total profit of IRs 22 million (US\$ 407,500) (28%) on an initial investment of IRs 77.5 million (US\$ 1.435 million) and this has been used to expand the VMCEDC corpus funds. Some self-help groups report that they have had access to the revolving funds five or six times. Loans have generally been used to fund small-scale cooperative businesses dealing with agriculture, e.g. goat-rearing, jasmine nursery; food production, e.g. cake/biscuit making, pickle making, curry powder manufacture; food selling, e.g. fish or rice; or fabrication, e.g. palm mats and baskets, textiles. All groups interviewed reported growth in their business and increased family incomes, but importantly not a single group reported any men as having given up fishing as a result of these businesses. In fact many indicated that the loans and increased incomes were being used by households to help buy diesel for their fishing boats! Most women interviewed indicated that their priorities for spending their increasing incomes were in order 1) food; 2) saving for daughters' dowries; 3) education of children; 4) healthcare. Access to low interest loans has resulted in the total elimination of private

³² Initially 62 women and 4 men; as of 2013 – 65 in total: 50 women, 15 men.

moneylenders and bonded labour from the constituent villages. Three issues are pertinent with regard to the micro-financing:

- Dependency:** The TET is slightly concerned that there is growing dependency on the micro-finance system by the self-help groups. It should be expected that as small businesses develop, the re-investment of profits internally should mean that the need for external funding ceases. There is no indication that this is occurring within the 28 self-help groups that the TET interviewed. Indeed, many have taken up to six iterations of loans, each becoming larger than the previous. Since as much as half of these loans is used to fund family requirements rather than business-related needs, this cycle is set to continue. Default rates are currently negligible, but unless businesses are built to become more financially robust, this may change for the worse. The TET encourages the UNDP-CO to discuss this aspect with the Field Project Workers and Zonal Officers and to get the self-help groups weaned off of the need for constant loans.
- Expansion:** As a corollary, when businesses seek to expand from small- to medium-sized enterprises, through changes such as people committing to full-time employment, or when taking on first employees, or when investing in more productive tools and equipment, significantly larger loans may be required and often for longer periods of time than just 10 months. Under the current limits for loans, the scheme will ultimately limit the size local businesses can aspire to without going outside to private banks or money-lenders. If the Trust really wants to increase the scale and profitability of the locally-based business economy within the Reserve, the TET recommends that it, with UNDP help, introduces the availability of another tier of loans that are larger and given for a longer period, e.g. up to IRs 300,000 over 24 months, the application for which is perhaps supported with a business plan, to facilitate enterprise expansion where appropriate³³.

The TET recommends that UNDP assist the Trust in examining the feasibility of providing another tier of loans to be available for the expansion of business enterprises.			
<i>Responsibility</i>	<i>Task</i>	<i>Time frame</i>	<i>Deliverable</i>
UNDP-CO/ GoMBRT	Complete a feasibility study on the possibility of introducing a second tier of larger loans made over a longer period, to facilitate the expansion of successful local enterprises	By end of June 2013.	Feasibility report on another tier of loans; and possibly agreement on, and regulations administering, such loans

- Community funds:** The corpus fund has proved particularly profitable having generated profits of 28% in four years. This has meant that the total amount of money available for micro-loans in each village has increased significantly and is set to continue to do so. However, there is only so much capacity in any village to take and repay loans. As a result, an increasing amount of money will not be working – it will simply be collecting and residing in village accounts. This is wasteful, not only of the money itself but also in the goodwill and conservation opportunities that are being foregone. The funds could be re-structured so that a minimum amount is always kept available for micro-loans to self-help groups, but that monies above this could be used as a Community Fund for use by VMCEDCs for collective improvements agreed through a democratic process perhaps needing a two-thirds majority in favour and perhaps the signature of the Trust Director. Such improvements could have a conservation-based focus in the first instance such as construction of local fish shandies; solid waste collection and disposal system (e.g. litter collection and burning point); community hall.

³³ **State Government comment:** SHGs will continue to be under the control of Trust and it will not be handed over to any other Department. SHGs will continue to be encouraged to approach banks and other agencies for loans and grants. However large scale business model is at present not contemplated for SHGs. One of the greatest achievements of these SHGs is that the role of money lenders has been almost completely eliminated.

The TET recommends that UNDP assist the Trust in examining the feasibility of allocating a proportion of the corpus fund for use in community-based projects

<i>Responsibility</i>	<i>Task</i>	<i>Time frame</i>	<i>Deliverable</i>
UNDP-CO/ GoMBRT	Complete a feasibility study on the possibility of restructuring the corpus fund to facilitate financing of community development projects	By end of June 2013.	Feasibility report on fund restructuring; and possibly agreement on, and regulations administering, community projects

82. Perhaps the group of activities showing most innovation and forethought has been that concerned with education and training of the younger generation in the fishing villages. The concept, believed to have originated with the Field Project Workers and developed accordingly, but also central to much conservation management in many countries, is that one can use the younger generation to influence their parents' actions and can assist them with taking up non-fishing careers. To this end, three actions have been undertaken:

- Vocational training programme: Since 2007, more than 1,900 youths from the fishing communities have undergone short vocational trainings in various colleges to diversify sources of income besides total dependence on marine resources. The TET is informed that the majority of the students that have graduated from these courses have found employment. Statistics for 2007-8 to 2009-10 show that out of 1,229 trainees, 847 (69%) were either employed or self-employed with only 17% unemployed due to lack of opportunities. Of those in some form of employment, 653 (77%) were employed outside of the fishing sector (i.e. 53% of the total trained). Interviews with current trainees show that while not all students are undertaking training in their preferred professions (the costs of being accountants or engineers are often beyond the economic reach of their families), they have taken up these courses with full interest and are grateful for the opportunities the courses offer. For most students, the Trust has paid the costs of the tuition, the equipment, uniforms, accommodation and transport, but in later courses as funds declined only tuition costs have been met. In order for this approach to have its intended long-term effect, it requires implementation well beyond the lifetime of the Project or simply a few children from a narrow cohort will be directed at non-marine employment. The Long-term Financing Mechanism could have provided the funds necessary to achieve this had it been capitalised. The fact that it has not, now places the onus on the State Government to continue funding of this initiative so that its benefits can be brought to full fruition.

TABLE 12: NUMBER OF STUDENTS COMPLETING THE VOCATIONAL TRAINING PROGRAMME FUNDED BY THE GOMBR TRUST 2007-2012

Name of Course	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Total	%
Tailoring	0	320	40	22	0	0	382	20.0
Diploma in Health Assistant	67	50	35	52	52	48	304	15.9
Diploma in Computer Application	76	70	40	48	3	2	239	12.5
A/C Mechanic	39	40	24	30	25	10	168	8.8
JCB	65	42	0	33	0	0	140	7.3
Basic Electrical and Plumbing	12	71	0	16	13	17	129	6.7
Car Driving	50	41	30	0	0	0	121	6.3
Catering Technology & Hotel Mangt.	0	17	0	12	12	23	64	3.3
Automobile Engineering	11	15	0	19	4	11	60	3.1
Welding	17	16	5	5	0	0	43	2.2
Primary school Teacher Training	0	15	0	25	0	0	40	2.1
Four-wheel drive training	0	0	0	38	0	0	38	2.0
Fashion designing	0	31	0	0	0	0	31	1.6
Auto Cad	0	29	0	0	0	0	29	1.5
Computer Hardware	5	20	0	0	3	0	28	1.5
Home Application - Repair & Service	0	19	0	0	0	7	26	1.4
Diploma in Lab Technology	0	0	0	10	6	10	26	1.4
Beauty care	0	19	0	0	0	0	19	1.0
Food Production	0	0	0	0	0	10	10	0.5
Printing Technology	4	5	0	0	0	0	9	0.5
Dip.in Operation Theatre Technology	0	0	0	0	6	0	6	0.3
First Aid Practical Nursing	0	0	0	0	0	2	2	0.1
Grand Total	346	820	174	310	124	140	1,914	

- Tuition coaching: The Trust funded teachers in 26 schools to carry out additional tuition for 2,500 children ahead of critical school examinations to boost their chances of good grades and increasing the opportunities for college entry, and importantly to help reduce the school drop-out rate. Fishermen tend to retire from active fishing around the age of 45 at which time sons tend to take over so that household incomes are maintained. This causes most boys to break their education midway and enter fishing at around the age of 15.
- Schools' awareness: programmes have been carried out to increase the awareness of the need and benefits of conserving marine resources in schools and local colleges; e.g. in 2012 alone, a biodiversity awareness campaign has been carried out in 114 schools and reached almost 54,000 students.

83. Only one attempt has been made to develop the sustainable use of marine resource use through mariculture or sea-ranching methods but it has proved very successful. Seaweed *Kappaphycus alvarezii* is being cultured largely by women, mainly along the coast near Olaikuda, on bamboo frames strung with “cuttings” (see Figure 7)³⁴. The seaweed takes about a month to grow to a size where it can be harvested. It is sold for use in the food and beverage industry where it is used as a flavouring and thickening agent.

FIGURE 7: SEAWEED MARICULTURE



Photos © Phillip J. Edwards

This output has achieved all its major objectives, and yielded substantial global environmental benefits, without major shortcomings. The output can be presented as “good practice”, hence is evaluated as **Highly Satisfactory**.

³⁴ **State Government comment:** *Kappaphycus* is not promoted by the Gulf of Mannar Biosphere Reserve Trust. The SHG who were undertaking mariculture of *Kappaphycus* had obtained loan for fishing-related activities like fish marketing, salt fish production, etc. but ultimately had used the microcredit thus received for cultivation. Though women SHG members are said to be raft culturing or highlighting that they are totally involved, only men, either from the family or hired, carry out the work of fixing the transplants in floating rafts. As per Government Order, *Kappaphycus* culture should not be carried out in the Biosphere Reserve but only on the north of Palk Bay region and has been identified by the State FD as an invasive alien species. Some links to authenticate the invasive nature of *Kappaphycus alvarezii* in the Gulf of Mannar Biosphere Reserve [were provided by the Govt.]. **TET response:** The TET notes and concurs with the State Government regarding the invasive nature of *Kappaphycus alvarezii* and acknowledges the fact that the Government Order restricts its culture in the Biosphere Reserve. The TET mission was taken to the site and shown the cultivation by Trust and EDC personnel as an example of a beneficial activity to the local community, but the TET notes that Olaikuda is on the north shore of Rameshwaram Island, just on Palk Bay. However, the Government would appear to be incorrect about the transplants being fixed to the rafts only by the men – this activity was demonstrated to us by one man and two women! .

STRATEGIC ISSUES

84. As can be seen from the foregoing part of the evaluation, the TET believes that the Project has had mixed success in achieving its stated aims. The aim of this section is to concentrate on some key cross-cutting issues.

PROJECT-SPECIFIC ISSUES

Role of the Trust

85. There is a fundamental difference of interpretation of the Project Document's intentions for the Trust between various actors. On the one hand, the international players hired at various times by GEF see the Trust being established as the single authoritative decision-making body for the Biosphere Reserve, on a par with many such bodies found internationally. On the other hand, the State Government disputes this, noting that the word "authority" as in "Biosphere Reserve Authority (BRA)" was never used in the Project Document. This is true. However, the idea of the Trust being the statutory apex decision-making body is clear as the following quotes from the Project Document make clear [TET's emphasis]:

Paragraph 31: *"The Trust/Foundation will have statutory authority and play a focal role in the implementation of this project, providing the institutional framework and working with Government to strengthen the overall policy framework to enable government agencies to better coordinate and collaborate in the enforcement of coastal zone regulations, including biodiversity conservation."*

Paragraph 33: *"The Trust/Foundation will ... have the authority to ensure that all developmental actions proposed by any sector in the Reserve are consistent with integrated coastal biodiversity conservation and sustainable management principles. To this end, adequate legal provisions are to be provided by the Government to the Trust/Foundation as the apex body for decision-making to implement the Reserve's framework management plan to be developed under component D."*

Paragraph 59: *"The GoTN ... will ensure that adequate provisions are made during the legal registration of the Trust/Foundation so that it is given a substantive development review role in the Reserve coastal zone. In this respect, the Trust/Foundation will be empowered to oversee the implementation of agreed upon actions for integrated biodiversity and coastal zone management in the project area by all relevant government agencies and institutions, among other stakeholder organizations. ... Based on this mid-term evaluation, the GoTN will make further provisions under existing laws and statutes to enable the Trust/Foundation to play an effective role as the apex management body for the Reserve."*

Logframe : Component A: Activity 1. *"Establish statutory Trust/Foundation with oversight powers".*

The reviewer of the Project from GEF's Scientific and Technical Advisory Panel (STAP) inferred the same role for the Trust:

"It is understood that the Trust/Foundation with the Project Coordination Unit constitutes the managing authority for the entire Biosphere Reserve, including the National Park."

Despite this, the Project Document provides some ambiguities over its intentions, for example in the Incremental Cost Analysis it states that:

"... the Gulf of Mannar Biosphere Reserve Trust/Foundation. The new structure will be of a "low-transaction cost design" that relies upon existing institutions to carry out most activities. The Trust/Foundation will serve as the key integrating mechanism for developing solutions to the multi-sectoral problems facing the Gulf."

which is not quite the singular authority implied elsewhere.

86. Whatever the interpretation, after ten years of project implementation, no such body has been formed. The MTE considered the concept to be a fundamental given and spent considerable time and effort in making recommendations to bring a BRA about. However, at a meeting of eight senior State Government officials (note neither the Trust's Board of Trustees nor the Project Steering Committee) held on 10th September 2008 to discuss the MTE's recommendations, the idea of a Biosphere Reserve Authority was roundly rejected as the minutes show:

“The members strongly agreed that the innovative suggestion of formation of Gulf of Mannar Biosphere Reserve Authority (GOMBRA) is not workable in the existing administrative mechanism of the State Government. Rather the members suggested that the Trust itself shall strengthen the coordination role played by the Trust in all decision making processes in the Gulf of Mannar Biosphere Reserve area to meet the objectives suggested to be achieved through the formation of GOMBRA.”

This reluctance to pursue this idea remains within the higher echelons of the State Government³⁵. During the TE a senior government official indicated during an interview that the Gulf of Mannar did not require a BRA since none of the other Biosphere Reserves in India had such a body. This is either naïve or disingenuous since one of the Project's main purposes was to test and demonstrate the feasibility of such an approach for replication to other Biosphere Reserves in India as the Project Document's Summary makes clear:

“The statutory Trust/Foundation is seen as an innovative mechanism that will allow for project methodologies and results to be replicated for the rest of the coastal area of Tamil Nadu and demonstrate an institutional model for India as a whole.”

The main reasons for opposing a move to a BRA are said to lie in the difficulties of its implementation rather than the lack of a legislative framework, and that experience shows that the State Government is right to be wary about creating new structures since these are always proposed when facing significant challenges but that strengthening existing structures is deemed to be more effective. This view appears not to be shared by all, and the TET heard that former Directors of the Trust are discussing the possibility of placing proposals for a BRA back in front of the State Government. Many other interviewees voiced the concern independently that the problem in bringing about a BRA was actually mostly about individual Departments being concerned about a dilution of their powers.

87. Nonetheless, the reality of the situation remains that the State Government, or at least some senior officials therein, remains opposed to the creation of a singular statutory decision-making body for the Reserve. Indeed this may have always been the case, since the Project's design did omit the term “Authority” and instead manufactured the idea of “Foundation/Trust” – a rather odd concept and perhaps something of a compromise. One assumes that if the political will at the time had been for a singular body there would have been no problem in terming it a BRA from the start. Indeed, the MTE notes that:

“It is apparent also that the project and logical framework were designed with insufficient participation of the principal partners responsible for subsequent organisation and implementation of the project.”

and while this is explained no further, this may be the example being referred to. While there are numerous examples of successful BRAs around the world, e.g. the Danube Delta BRA in Romania, the Nockberge BRA in Austria, and the Seaflower BRA in Columbia, not all Biosphere Reserves have such a body. In Latvia, the North Vidzeme Biosphere Reserve which covers one-sixth of the country has an Administration but with strongly legislated powers for coordination, while all of the Biosphere Reserves in Canada hold no regulatory powers but have bodies acting as conveners bringing stakeholders together to seek partnerships and advance a common agenda. In Chile, a UNDP-GEF

³⁵ **State Government comment:** Formation of a Biosphere Reserve Authority (BRA) was not considered feasible at this stage. The existing legal framework was found adequate. **TET response:** This appears to have become something of a mantra – if you say it often enough it must be true.

project³⁶ assisted the Government in establishing multiple-use marine coastal protected areas, each with restricted use and core zones, and effective funding structures in place. A new governance model was created by joining existing laws from multiple zones into a single legal instrument and establishing a multi-institutional regional commission and a multi-stakeholder corporation composed of public, private and community representatives to provide for inter-institutional and multi-stakeholder governance. Given that the GoTN are extremely reticent to pursue a statutory BRA, it is important that this position be respected, since attempting to impose something from outside or above is not going to work and runs counter to UNDP's consensus-building, bottom-up approach. Yet, within that framework, the Trust's role needs to be strengthened.

88. Notwithstanding the State Government's willingness to continue funding some of the Trust's activities, many see the Trust in its current form to have been weakened to the point of impotence. The Government Order G.O (Ms) N^o. 265 dated 16th November 2012 provides for a five-year budget (2013-2017) to undertake biodiversity overlay (read research) of IRs 16 million (US\$ 296,296); capacity building of IRs 24 million (US\$ 444,444); and sustainable livelihood and eco-development activities of IRs 60 million (US\$ 1.1 million). Yet less than a month later, in a letter dated 14th December 2012, the Additional Chief Secretary to Government writes to the Trust Director that:

"For deciding the funding requirement for the Trust, I am to request you to propose a funding pattern that restricts itself to research and awareness building. ... While deciding the funding pattern there is no need for the Trust to take up further capacity building or livelihood generation activities and the Trust should confine itself only to research and awareness generation activities." [TET emphasis.]

Although the TET is aware that some of the continuing aspects of the Project such as the work of the Anti-poaching Watchers and Field Project Workers are continuing to be funded and operated through appropriate government departments, predominantly the FD, and also understands that these restrictions do not apply to the Trust's mandate, nonetheless such significant restrictions on its budget seriously hamper its ability to act effectively as a body leading the conservation activities in the Biosphere Reserve. For example, cutting funding for the vocational training and capacity building will bring to a halt one of the Project's most successful programmes aimed at reducing ecological stress over the long-term, namely that of encouraging fisher-family children to take up alternative employment opportunities thereby reducing fishing pressure on the marine resources. To do this for just a few years of the Project and then to cease its further funding makes no sense and wholly undermines the progress already made. Furthermore, the State Government appears to wish to weaken the Trust in other ways, e.g. by passing over its livelihood-related programme to the Rural Development Department. This will destroy the carefully constructed relationship that the Trust has built up with the local fishermen and remove the conservation awareness contacts that the Field Project Workers bring since the Rural Development Department would not have these skills and for them it would be just another programme to implement. As the draft minutes from the Board of Trustees meeting of 15th February 2013 note,

"Taking over all the livelihood related programmes of this Trust by the Rural Development Department would eviscerate the work of the Trust [and this] would be just one more activity for Rural Development Department."

The TET could not agree more. Finally, if the Trust was considered to be an important and worthwhile entity by the State Government one wonders why it has appointed a Chief Conservator of Forests who will retire at the end of April to the post of Trust Director. Let it be clear that the TET is not questioning in any way Dr. Bharaathi's competence or technical suitability for the post; far from it. But with the closure of the Project and the major transitions to the way the Trust operates that will accompany this closure, the Trust needs as much stability in its leadership as it can muster, not a leader for four months and another new one thereafter. The TET is not alone in viewing such an appointment as an opportunistic remedy by the Government for an awkward problem in an organisation it sees as of little value and hence where little harm can result.

³⁶ Conserving Globally Significant Biodiversity along the Chilean Coast. PIMS 2041.

89. Many interviewees also pointed out that little progress has been made towards a properly coordinated approach to the management of the Reserve, for example there is still a Biosphere Reserve Director, a Trust Director and a National Park Director rather than having a single position; and until 2013 the Biosphere Reserve Committee organised by the Forest Department to oversee management did not include the Trust Director. The multiple level coordination committees established under the Trust, and much-lauded by the State Government, show little evidence of being effective. As the minutes of the PSC meeting held on 7th December 2011 note:

“The Chairman informed that there is a lack of coordination between line Departments and Trust.” [sic]

and one interviewee noted,

“the committees are scheduled to meet between two and four times a year at different levels but officials are too busy, meetings are postponed, and sometimes they meet just once a year. If they occurred as planned, the Trust might be effective, but the meetings are too infrequent to develop meaningful relationships and people in the various positions change regularly.”

Only the District Level Coordination Committees, which have met 2-4 times a year, appear to display some effectiveness in providing a voice and convergence point for the Trust to achieve some interdepartmental coordination, yet even so many of the stakeholders voiced concerns that each Government Department has its own mandate and its own agenda and hence continue to work at cross-purposes within the Gulf of Mannar. Others still made the points that the Trust is viewed simply,

“as a vehicle of the Forest Department and hence the other line agencies back away from cooperation”,

and that

“Coordination is not coming through because the Trust is headed by the Forest Department ... Lack of coordination will now increase because the influence of the outside funding agency will be lost.”

An inherent weakness of the Trust, pointed out by many stakeholders, is that because it is a registered society, it is seen by most in the Government as a body that lies outside the fabric of Government, something akin to an NGO, and by the NGOs and local communities as being Government because it is run by the Forest Department, the more so now that the Project has ended, thereby being distrusted and ignored by both groupings. Other actors, such as the National Government and UNDP-GEF indicated that there was disappointment with this outcome.

90. If the Project is to leave a legacy, the TET believes that these issues need to be addressed and that the Trust needs to be considerably strengthened. Conservation is more than just about protecting wildlife, and while the TET understands the obvious reasons for giving the lead of the Project (and therefore also of the Trust) to the Forest Department, its models for conservation are driven by its terrestrial experience which has little relevance in a marine setting where the boundaries are literally more fluid, particularly with regard to pollution and development issues. As one interviewee pointed out, the greatest threat emerging currently is the modernisation of India through the expansion and transformation of the economy. Conservation, and its champions e.g. the Ministry of Environment, is still seen by many as an obstruction to this development, hence it is important to mainstream conservation right at the centre of government. The marine focus of the Biosphere Reserve means the role of the Fisheries Department needs to be increased which is difficult if the Forest Department leads on all issues, and the interplay between the roles of the Trust and the Pollution Control Boards and the Coastal Management Authorities needs to be recognised and strengthened. While accommodating the wishes of the State Government to avoid a singular authority, the TET believes that the Trust needs restructuring so as to be better placed to meet these challenges; to overcome the perceptions and problems that arise from it being controlled by a single sectoral line agency, i.e. the Forest Department; and to provide it with the ability to fully meet its primary role – that of coordinating all activities within the Biosphere Reserve to advance the cause of biodiversity conservation while ensuring the sustainable livelihoods of the fisher communities that are dependent upon the marine resources. To that end, the TET recommends that the UNDP-CO assists the State Government in

passing control of the Trust to a body with greater inherent powers of coordination, namely the Indian Administrative Service. The initial idea is for the District Collector, who already chairs the DLCC, to be made the Trust Director, but given that the Biosphere Reserve covers two Districts, it may be necessary to appoint a Regional Commissioner. Alternatively, since the majority of the Biosphere Reserve falls within Ramanathapuram District, the District Collector for this District could be appointed as Director, and the District Collector for Thuthukudi District could be appointed as a Deputy Director³⁷.

The TET recommends that UNDP assist the State Government in passing control of the Trust to the Indian Administrative Service.			
<i>Responsibility</i>	<i>Task</i>	<i>Time frame</i>	<i>Deliverable</i>
UNDP-CO/GoTN	Negotiate an agreement to change the appropriate registration paper to enable a Regional Commissioner or District Collector to assume the role of Director of the GoMBR Trust.	As soon as possible.	Revised regulations.

91. While the idea of the Trust has been innovative, and has spanned the period from a sectoral/protectionist approach towards conservation to one that has adopted a greater cross-sectoral holistic approach, there are many that believe the mandate of the Trust is insufficient to meet this change and the challenges ahead, and hence requires changing. Providing it with regulatory powers through establishment of a BRA is not acceptable to the State Government, yet the Trust requires more teeth to be accepted inside the Government fold as a serious player. This could be done by providing it with a statutory watchdog role over agencies whose activities have an impact on the Biosphere Reserve. The TET recommends that the UNDP-CO also assists the State Government in providing the Trust with the powers of compliance monitoring through the Environmental Protection Act 1986. There is no regulatory function intended here – simply the ability for the Trust to monitor that other agencies do what they say they will do at the time they say they will do it. Non-compliance can then be brought to the attention of the appropriate agency, and if not heeded, can be raised with senior Government officials.

The TET recommends that UNDP assist the State Government in providing the GoMBR Trust with the powers of compliance monitoring through the Environmental Protection Act 1986.			
<i>Responsibility</i>	<i>Task</i>	<i>Time frame</i>	<i>Deliverable</i>
UNDP-CO/GoTN	Negotiate an agreement to change the mandate of the GoMBR Trust to include compliance monitoring of agencies influencing the Biosphere Reserve.	As soon as possible.	Revised regulations.

Lack of functionality in the Biosphere Reserve

92. The TET is disappointed to find that 24 years after the founding of the Biosphere Reserve and after ten years’ implementation of a multi-million dollar GEF Project, the basics of the Biosphere Reserve are still not in place. The Biosphere Reserve, although designated, has no place in law within India. Its boundaries remain undefined despite the Project developing a Management Plan. The MTE devoted the whole of its Table 3 to questions relating to the definition of boundaries and the jurisdiction of the Biosphere Reserve, none of which appear to have been answered even though the Management Plan should by its own definition have undergone one of its three-year reviews since the MTE. How is it possible to have an “integrated” management plan if such basic questions remain unanswered? Similarly with the zoning: a Biosphere Reserve by definition comprises three zones, a core zone, a buffer zone, and a transition (or economic) zone; and while only the former requires legal protection (as it has here), definition of the other two (under whatever flexible arrangement is deemed fit) should be applied. The STAP review could not be more clear on this issue:

³⁷ **State Government comment:** A senior IFS officer of the middle/senior level will continue to head the Trust. **TET response:** Well that knee-jerk reaction appears to signal the end of a good idea from the Indian Government to improve coordination.

“The formulation of a management plan for the Biosphere Reserve as a whole, including appropriate zoning, is essential. The project document, not providing a detailed map and merely defining the Biosphere Reserve by a 10 km wide strip on both sides of the coast line, leaves open the difficult issue of a fully fledged zoning system with appropriate overlays, not merely for biodiversity but also for other functions. When the zoning is carried out, it will be essential to define clearly the boundaries of the buffer zones on the marine side and, even more important, on the terrestrial side so that people know clearly whether they live within a buffer zone or in a transition area and what type of activities they can pursue on the land part as well as on the marine part.”

Yet the Project has not attempted to deal with these fundamental issues. Indeed, the concept of a transition zone has not even been applied (although to be fair, the TET understands that this latter state is currently the case for all Biosphere Reserves in India). Furthermore, through an extended period when technical issues, local objections, and political priorities have taken precedence, even demarcation of the boundary of the Marine National Park, the core zone of the Biosphere Reserve, has not taken place, even though the STAP review considered

“Demarcation should ... be considered the highest priority and conducted in appropriate consultation with the stakeholders.”

Without defined boundaries and zones, and as a result without definitions of prescribed and proscribed activities, it is not inappropriate to ask what function the Biosphere Reserve actually plays. The TET cannot find any evidence that the Reserve itself plays any function at present that is not duplicated by another designation or management agency.

Eco-tourism

93. The Project made no progress in developing a plan or guidelines for eco-tourism, despite it being an activity in the Project Document, a recommendation in the MTE, and a major section of the Management Plan³⁸. This was noted in the 2012 PIR. This is seen by the TET as a missed opportunity on three fronts:

- i) Development of limited access in terms of both geographic area and number of or tourists (by use of a permit system) to one or more areas of the Marine National Park could have provided a significant source of alternative finance for managing the Park. Boat landings on the islands need not be necessary. Had basic research work been undertaken on dugongs such that tourists had a high chance of sightings, considerable numbers of high-paying tourists could have been attracted since there are few such opportunities globally. Alligator Hole River in Jamaica provides an example for a sister species, the manatee.
- ii) Development of eco-tourism even outside of the Marine National Park would have brought considerable economic benefits to the local population through provision of tourism-related services – glass-bottomed boats; boats to access the reefs for snorkelling and diving; birdwatching guides; accommodation and food; to name but some. Since such a tourism industry would be wholly dependent upon the health of the reefs and other marine habitats in the Reserve, the sustainability of such an industry is linked directly to the success of conservation efforts. It has been proved time and again that the best way to manage conservation successfully is to link it directly to the economic welfare of at least some local people. By providing a political constituency for conservation there will be a powerful local and independent voice in favour of conservation management.

³⁸ **State Government comment:** *The Dept. of Tourism and the District Collectorate of Ramanathapuram and Tuticorin are preparing proposals on eco tourism. This will be placed before the authorities to study the feasibility for carrying out the works. GoMBRT has also submitted a proposal to the Commissioner of Tourism for a budget of 1.5 crores [IR 15 million = US\$ 278,000].* **TET response:** Yet again this seems so late. Why could this not have been done during the Project when it could have been integrated with other activities so much more easily and effectively? “*the works*” sounds like yet another infrastructure scheme – eco-tourism does not need such things; the attraction is the Marine Park itself, all that is necessary is for a system of access for tourists to be determined, perhaps through a permit system where numbers can be controlled and fees exacted; and support to the local community to develop facilities such as home-stay or small guest lodges, boats, glass-bottomed boats, guides, etc. Perhaps further interpretive facilities further south would complement the current ones.

- iii) Since India has an economy that is modernising rapidly, there is a new, expanding middle class with increasing disposable income. Therefore, there is a burgeoning national market for tourism of which the Gulf of Mannar could be part. Not only does this bring the economic benefits outlined above, it also offers countless opportunities for people to come and see and learn about the issues facing the marine environment around India and to take those home and spread the word.

The development of an outstanding interpretative centre at Kunthukal by the Project, which reputedly has had over 400 visitors per day since it has opened, shows just how much demand there is for such facilities and tourism. This should be considered a core activity of the Trust – raising awareness, developing sustainable livelihoods for local people based on the principals of conservation; finding alternative funding sources for conservation management – and yet in the minutes of the meeting of the Board of Trustees held on 22nd August 2011, Agenda item 3.8 Development of Eco-tourism reads:

“Regarding the proposal of the Trust for commissioning of a ferry service by Tourism department at Mandapam, the Chairman said the Trust should not get into areas that were not in the core thrust of its activities. Hence this matter was dropped.”

What organisation could possibly be in a better position to develop, or at least coordinate the development of, eco-tourism in the Gulf, balancing the need for care and sensitivity with local knowledge for careful exploitation of the resources? The minute quoted above is a sad indictment of the sector-based thinking that continues to stand in the way of the efficient integrated approach that is necessary for the effective management of a Biosphere Reserve. The TET notes that the Project can do no more, but urges the State Government to effect a more enlightened approach to develop eco-tourism that can bring huge benefits to the area if managed with sensitivity.

Alternative fishing grounds for traditional fishers

94. The creation of the Marine National Park in 1986 deprived traditional fishers from accessing this rich fishing area to pursue their livelihoods. The TET believes that the Project missed an important opportunity to gain the goodwill of the fisher communities by not developing alternative fishing grounds outside the Marine National Park. Greater involvement of fisheries experts could have resulted in measures being taken³⁹ such as the deployment of artificial reefs and sea ranching of commercially important species (e.g. captive bred and reared pearl oyster spats, seed of sea cucumbers, and species of prawns) along the coast in inshore waters within three nautical miles of the coast and islands, earmarked exclusively for the artisanal fishers as per the *Tamil Nadu Marine Fishing Regulation Act (1983)*. Deployment of artificial reefs around the edge of important benthic fishing areas would also have prevented trawling operations in these areas leading to increases in the benthic fauna. The minutes of the Board of Trustees meeting on 22nd August 2011 notes feedback from two VMCEDC presidents in Ramanathapuram District who said:

“... that trawling close to the shore area is the biggest problem in the District, which is being carried out by people other than local fishermen, hailing from outside the project districts who do not care about the sustainability of the marine resources.”

Such measures would have been an inspired intervention, offsetting perceived lost opportunities and bringing the traditional fishermen to support the Trust and its activities, thereby avoiding the continuing opposition to demarcation of the Marine National Park boundaries and to loss of access to the islands for traditional purposes such as net drying and sleeping. Such greater engagement over the primary livelihood issues of the traditional fishers would have culminated in a more effective participatory approach on various other conservation activities of the Project.

³⁹ **State Government comment:** *Introduction of artificial reefs for development of alternate fishing grounds have been promoted/created by the Fisheries Dept., SDMRI and CMFRI in pilot scales. Since post deployment has produced good results in terms of catch, more such deployment programmes are being planned for the future. Since breeding of shell and fin fishes occur in shallow waters of the Marine National Park, fishing will not be promoted since this might hinder/destroy the growth of delicate forms of corals that act as a breeding and nursery grounds.* **TET response:** This is good – but again the TET is forced to ask why all these ideas always seem to be “being planned for the future” rather than having been accomplished in the past ten years?

Species recovery plans

95. One of the major omissions in the Management Plan is the absence of species recovery plans and species conservation plans⁴⁰. There are many endangered species present in the Biosphere Reserve which are included in Schedule I under the *Wildlife (Protection) Act 1972*. These include species such as hard and soft corals, holothurians (sea-cucumbers), gastropod molluscs, a range of fishes such as sharks and rays marine turtles, and marine mammals including dugong. While it is correct that the Project should have prioritised coral conservation and restoration since the reefs provide key habitat and are amongst the most biologically rich ecosystems in the world, it appears to have done so at the expense of all other species conservation work. Even the dugong, taken as the emblem of the Trust and the Biosphere Reserve because of its charisma and rarity, has been ignored⁴¹. There has not even been a study undertaken to attempt to determine its current population, let alone an examination of the means of enhancing this. Those concerned with the Project maintain that the number of dugong is increasing based on anecdotal evidence from fishermen and an increasing number of incidences of accidental deaths from propeller collisions with trawlers and an increase in the number of carcasses washed up on the islands. This is arrant nonsense and could be indicative of the exact opposite – a sharply declining population. It also clearly indicates that the Project has not addressed the effective conservation of this species through measures designed to prevent, or at least reduce, such collisions. The Project could have taken the opportunity presented by GEF funding, for example, to tag one or two dugongs with satellite transmitters to determine their movements, obtain a better idea of their distribution and habitat use, and their behaviour, as for example is being done off the coast of the United Arab Emirates; or for turtles in the Gahirmatha Wildlife Sanctuary and yellow-fin tuna on the west and east coast of India by the Fishery Survey of India and the Central Marine Fisheries Research Institute. However, the TET notes that a paper⁴² in the international journal *Marine Mammal Science* suggests that fishermen in India are less likely to kill dugongs that are caught as by-catch in nets than their counterparts in Sri Lanka – 9% in India would kill it cf. 93% in Sri Lanka; but 56% of those in India did not answer – a reluctance that the authors put down to .

“... the knowledge in the communities that dugong hunting is illegal. In Sri Lanka, law enforcement in these remote areas is virtually non-existent, allowing people to be more open about illegal activities.”

The paper also notes that 77% of fishermen interviewed in India showed a positive attitude to conservation of dugongs compared to only 18% in Sri Lanka, while figures for conservation of sea-grass were 32% and 12% respectively and for “other species” they were 57% and 15%. The UNDP-CO suggests that these differences are related to increases in awareness brought about by the Project, but the paper makes no comment.

⁴⁰ **State Government comment:** *The Wildlife Warden of the Marine National Park had initiated species recovery programmes for certain endangered fishes like sea horse and pipe fishes. As this is the mandate of the Marine National Park, duplication of the work was avoided by the Trust.* **TET response:** Unfortunately, this again sounds like nonsense to the TET. First, no such programmes were described to the TET when the Wildlife Warden and his Deputy were interviewed. Second, the Integrated Management Plan covers the geographic area of the entire Biosphere Reserve, not just the activities mandated to the Trust, and no such programmes are to be found in it. Finally, if such programmes were initiated (and at best it sounds like they were initiated but soon discontinued) questions need to be asked about why management actions were being undertaken that were not sanctioned under the Management Plan when this is the guiding policy document. Yet again, the much vaunted integration of authorities, policies, and management actions is actually not born out by the facts on the ground.

⁴¹ **State Government comment:** *Trust did not take up research on dugongs because CMFRI is running a project from 2003 on studies of marine mammals in the Indian seas including Gulf of Mannar with financial aid from the CMLRE (Centre for Marine Living Resources and Ecology), Ministry of Earth Sciences, Government of India. There was no need for the Trust to duplicate the efforts.* **TET response:** The TET views this as a particularly weak excuse. While the aim of avoiding duplication is welcomed, the lack of coordination that is still evident in various aspects of the management of the Biosphere Reserve also appears to pervade the research studies. The TET would have thought that if a long-term research project was underway since 2003 that some of the results from it would have been made available to the Trust to guide management decisions for dugongs. They appear not to have been. Indeed this comment is the first time the TET has even been informed about such research! Conversely, with even basic levels of integration, the GEF funding for the Project could have been used to supplement the existing research (as per the examples given) without any duplication taking place.

⁴² Ilangakoon, A.D., Sutaria, D., Hines, E. and Raghavan, R.. 2008 Community interviews on the status of the dugong (Dugong dugon) in the Gulf of Mannar (India and Sri Lanka). *Marine Mammal Science*: 24(3): 704-710.

96. Given the increased security achieved by the Project for the core area, this could have been used advantageously to effect proactive conservation interventions such as the artificial propagation of rare species through sea ranching programmes. Since many threatened species have been bred successfully in good numbers in captivity standardised technologies exist and could have been taken advantage of to promote visible conservation results; e.g. holothurians⁴³, commercially valuable pearl oysters, sacred chank, sea horses, and a number of marine ornamental fishes by the Central Marine Fisheries Research Institute, Thuthukudi Fisheries College and Research Institute, the Centre of Advanced Study in Marine Biology, and the Central Institute of Brackish Water Aquaculture. Furthermore, such techniques could have been used to revive historically famous and economically important commercial fisheries, e.g. pearl oysters and chanks, the historical areas for which have specific names like the “*thollayiram paar*”, “*aarubaham paar*”, and “*pulikuththi paar*”. Such a revival of stocks, or artificial breeding, could have led to sustainable commercial exploitation under strictly licensed conditions thereby directly addressing livelihood issues of the traditional fishers and earning their confidence and willing cooperation and making them firm advocates for conservation approaches. While the TET understands that the National Government regards such initiatives with scepticism, raising the problems of control of trade in rare species as a key issue, the initiative could at least have been tested on non-Schedule 1 species.

RELEVANCE

97. A discussion of the relevance of the Project towards the national development priorities covers three distinct but overlapping issues – relevance to biodiversity conservation and GEF priorities; relevance to national policy; and relevance to the current context on-the-ground.

98. Biodiversity conservation and GEF priorities: The most significant measure of relevance has to be that whether the Project addresses the conservation of globally threatened biodiversity. For the Gulf of Mannar in India this is overwhelmingly the case since the area supports some of the most important and diverse populations of marine organisms in the world including the only representative of the Class Enteropneusta, *Balanoglossus* (known as a hemichordate because of its evolutionary link between invertebrates and vertebrates), which is endemic to the area, and charismatic fauna such as the dugong. With regard to GEF priorities, the Project was designed under GEF-3, so the priorities under this are relevant. The Programme Objective for OP-2 Coastal, marine & freshwater ecosystems at that time was:

- “(a) Conservation can be ensured by ecosystem functioning through the establishment and strengthening of systems of conservation areas. The scope will be tropical and temperate coastal, marine, and freshwater ecosystems areas at risk; and
- (b) Sustainable use can be ensured by systems which combine biodiversity conservation, production, and socio-economic goals. The scope, as set out in the Operational Strategy, includes strict protection on reserves, various forms of multiple use with conservation easements, and full scale use.”

and a successful outcome was defined as:

“one where globally important biodiversity has been conserved or sustainably used in a coastal, marine, or freshwater ecosystem”.

Amongst the five “*typical examples of activities that could be modified specifically to sustainably manage biodiversity*” that are listed are:

⁴³ **State Government comment:** A study has been completed by ZSI and the final report is awaited on the population status of holothurians (sea cucumbers). Unless trawling is stopped in these “paars” there is no point even thinking of restoration. Trawling mows the bottom and hence there is mass destruction in the sea bed. For more than two decades, claiming of “perfecting” pearl oyster culture by some institutions has been made but sadly there are no private parties or entrepreneurs willing to take it up. **TET response:** Again, something is awaited rather than having been done. As regards “no private parties or entrepreneurs willing to take [pearl oyster culture] up”, that is exactly the point the TET is making – a demonstration project could have been carried out and funds could have been made available to provide some entrepreneurs with an incentive to start such culture.

- “(a) *integrating biodiversity conservation and sustainable use objectives in water and land use, and natural resource use management plans;*
- (b) *integrated pilot projects providing alternative livelihoods to local and indigenous communities residing in buffer zones of globally important biological areas; ... and*
- (e) *establishment of long-term cost recovery mechanisms and financial incentives for sustainable use.”*

It should be clear from the descriptions of activities included under the foregoing section *Achievement of Project Outputs* (paragraphs 60-83) that the Project has fulfilled these aims and approaches. Furthermore, the Project remains in line with GEF-5 priorities, since under *Objective Two: Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors*, the rationale states:

“The incorporation of biodiversity conservation, sustainable use, and benefit-sharing into broader policy, legal, and regulatory frameworks is not taking place in many GEF-eligible countries because of a number of factors. These factors include poor governance, weak capacity, conflicting policies (e.g., tenure regimes biased against “idle” lands), and the lack of scientific knowledge and incentives.”

and that:

“GEF will support the development and implementation of policy and regulatory frameworks that provide incentives for private actors to align their practices and behaviour with the principles of sustainable use and management.

99. The TET has not had sight of any national policy framework documents so has not been able to assess the Project in the national context. However, interviews indicated that the Project was still considered highly relevant since there have been other Biosphere Reserves established since the Gulf of Mannar, and new UNDP-GEF projects are being formulated for other marine areas – one in Malvan, Maharashtra state and one in Kakinada, Andhra Pradesh state. New Coastal Zone Management Rules were also published in 2012. Within the current context, at the end of the Project, its relevance remains high since the Gulf of Mannar remains under considerable threat. The Sethusamuduram Canal project remains suspended but not cancelled, and the review study indicated that even with mitigation and monitoring measures there will be considerable impact on the coral population by dredging should it be re-started. The human population around the shores of the Gulf continues to grow and despite increased conservation efforts by the State Government, limited resources means that threats remain. The Project has increased awareness of the need for biodiversity conservation through all of the coastal zone of the Biosphere Reserve reaching an estimated 77,000 fisherfolk in 248 villages and has introduced a number of important initiatives including limitations on trawling and seaweed collection, increased levels of protection and enforcement, developed supplementary incomes of villagers to reduce the pressure on marine resources, and moved to try and reduce the number of future fishermen by expanding employment opportunities through vocational training. These, along with moves to increase the coordination of the Government agencies involved in various aspects of managing the Reserve, have provided the building blocks to combat the threats and their relevance remains unquestionable.

The Project intervenes in an area of huge importance globally for marine biodiversity, is congruent with GEF and national priorities, and remains pertinent in the light of the current levels of threat; hence it is evaluated as **Relevant**.

SUSTAINABILITY

100. Financial: The Long Term Funding Mechanism has not been capitalised by the Project and therefore this independent source of finance for use by the Trust is not available. This has significantly weakened the ability of the Trust to fund its own initiatives, e.g. continued funding for the vocational training programme. Notwithstanding this, the outlook for the long-term financial sustainability of the Project appears fairly strong. There is a clear commitment from the State Government to continue to fund various aspects of the Project through a number of routes – the State Government has taken over direct payment of the contracts of the Field Project Workers; is paying the

salaries of the Anti-poaching Watchers through the Forest Department budget along with the funding necessary to pay for the patrol boats; and has agreed a budget to pay for the Trust activities during the period 1st January to 31st March 2013 as the Project ceases all activities. From then on, a four-year budget has been sanctioned, although this appears to have scaled back by reducing the Trust's activities to awareness-raising and research (see paragraph 88). The micro-finance system is now large enough and profitable enough to be self-sustaining; in fact there may be so much money available in it that it cannot all be used efficiently and alternative uses may be possible (see paragraph 81). Only the long-term financial well-being of the vocational training programme seems to be at risk. Yet even with this apparent good financial health, the TET believes that the Project has missed a significant opportunity to provide at least one source of alternative finance – that which could come to both the Marine National Park (or at least the Trust) and the local people had eco-tourism been developed and promoted (see paragraph 93). Given that the risks that affect this dimension are negligible, and more in degree of scale than absolute, the financial sustainability of the Project is considered to be **Likely**.

101. Socio-economic: The Project has been implemented through participatory processes with a range of stakeholders. Most of those people interviewed by the TET at the District and local levels expressed support for the Project's aims and a willingness to continue conservation actions because of the benefits that they brought. Without exception, members of the self-help groups indicated that the availability of low-interest micro-credit had boosted their family incomes and as a result they had hopes that they could provide a better education for their children and enable them to leave fishing as a profession. Long-term reduction in fishing pressure has been a recurrent theme of the Project. There is also anecdotal evidence that the awareness-raising programmes are bearing fruit, especially amongst children who pressure their parents into behavioural change – e.g. live by-catch is now often thrown back into the sea instead of being left for the scavengers. The results of such awareness are also apparent politically through increased agitation from the artisanal fishers for bottom trawling to be curbed within the Biosphere Reserve. As a result, the socio-economic sustainability is adjudged to be **Likely**.

102. Institutional and Governance: The institutional sustainability of the Project appears relatively good. The GoMBR Trust has been established by Government Order as a registered society in 2000 with the Chief Secretary to Government of Tamil Nadu as the Chair of the Board of Trustees. It therefore enjoys high level support from the State Government, a point reinforced by the latter's willingness to continue funding its activities, albeit in a restricted form. However, many interviewees considered that there were serious weaknesses inherent in its functioning:

- i) no home – many within government see it as a body outside of the government framework, while those in the NGO/community see it wholly as government;
- ii) identified as Forest Department – a common view was that the Trust is seen as an extension of the Forest Department and that other line agencies are wary of full engagement with it;
- iii) ineffectual coordination function – some interviewees indicated that its coordination committees met too infrequently to have a meaningful role; and
- iv) narrow scope – another view encountered was that it's role is now mostly about conservation awareness-raising since this function was the only one not covered by other agencies.

The veracity of these arguments is examined elsewhere (see paragraph 85 *et seq.*), and it is not the purpose of this section to re-examine them. However, the TET views these weaknesses as perceived by others, to be risks to the long-term viability of Trust over the long-term. If the Trust is seen by a wide range of actors to have weaknesses in a number of spheres that raise questions about its relevance and its ability to be delivering its mandate with any degree of effectiveness, then it will be only a question of time before those in charge of the State's limited financial resources raise questions as to whether it is worth continued financing. A more centralised role with greater powers of oversight as recommended in this report may help – but these still need agreement. Therefore, at present, the TET adjudges there to be moderate risks associated with this dimension of sustainability, and the institutional sustainability is considered to be **Moderately Likely**.

103. Environmental: Risks associated with this dimension of sustainability are present and mostly relate to the potential impact of climate change, particularly elevated sea temperatures resulting in bleaching of the coral reefs, as happened in 2010. Significant bleaching could greatly reduce the ability of the Gulf of Mannar to support its fisheries, however it remains unclear as to why some colonies of a given species succumb to this problem while others of the same species survive; it may be due to the comparative depth of water a colony is growing in. The risk is deemed real, but slight, and with the otherwise general improvements in the health and extent of habitats, the environmental sustainability is deemed to be **Likely**.

Since UNDP-GEF deems each risk dimension of sustainability to be critical, the overall rating for sustainability cannot be higher than the rating of the dimension with lowest rating, and as such the overall sustainability of the Project has to be ranked as **Moderately Likely**.

CATALYTIC ROLE AND REPLICATION

104. To date there has been no replication or scaling-up of any aspect of the Project, and no visible attempt to do so at either national or State level, although the UNDP-CO notes that the Project has “*contributed to the larger policy processes in the country, including the Coastal Regulation Zone Notification that tries to balance conservation and development in the coastal region*”. The Trust has no champions to attempt such replication, and in the TET’s view its efficacy as a management or even coordinating body remains unproven. While the recommendations made in this report (see paragraphs 90-91) would make it a stronger and more effective body, in which case its replicability may be more relevant, other management models exist in India (e.g. the Chilika Lake Development Authority in Oridisha) which may have more appeal since they are more closely aligned to those found for other Biosphere Reserves in other countries. While the Trust may fit what is required by the GoTN, in the TET’s view this is only because it is a compromise in the face of significant resistance to attempt something new by the self same Government. The TET was asked by UNDP-GEF Regional Technical Advisor in Bangkok if the Trust would be useful mechanism for other Projects in other countries. The short answer is no since it does not bring the degree of management integration that other models have proven elsewhere and competition between line agencies remains evident.

105. The main catalytic role has come at the demonstration level where a range of innovative approaches have been piloted successfully and should prove replicable, but then in many cases they themselves are replications of models used widely with the GEF portfolio. For example, the micro-finance facility has been particularly effective in this Project and perhaps rolled out on a more extensive scale than the Lead Evaluator has seen before; but it is not a new concept. The VMCEDCs are innovative and have been a useful tool for awareness-raising. The key to making them function has been the link to making the micro-finance available only to their members. This concept has been used in Cambodia where it proved effective in a terrestrial protected area⁴⁴. Perhaps the most innovative idea has been to take a generational approach to reducing the fishing pressure on the resource base of the Reserve by providing additional tuition to fisher children at key exam times and by improving the access to vocational education at colleges and training institutes. This idea requires very long-term financial commitment if it is to meet its objectives – short-term project-length inputs will be insufficient to provide anything but a blip within one educational cohort – and it appears unlikely that such commitment is now forthcoming from the GoTN. However, linked with the designers’ idea for an independent Long Term Funding Mechanism it has much to recommend its replication elsewhere. The only other innovative idea has been that of hiring Anti-poaching Watchers. If implemented in a somewhat more effective way – more of them, equipped properly with adequate communications equipment, and perhaps with the watchtowers that the designers proposed – the idea would be worth replicating in other marine reserves.

⁴⁴ *Establishing Conservation Areas through Landscape Management (CALM) in the Northern Plains of Cambodia* ATLAS ID 47478 PIMS 2177.

COUNTRY OWNERSHIP

106. The TET finds that the Government of Tamil Nadu has taken ownership of this Project, yet it has manifestly altered its emphasis to fit its own ideas of what is needed. This would appear to have come about because insufficient consultation with the Government accompanied the original design and perhaps not enough credence was given to its views at that stage. Nonetheless, the Project Document which the State Government signed up to is relatively unambiguous in its intentions to establish a singular coordinating structure for the Biosphere Reserve along with a sustainable funding mechanism to enable it to undertake conservation activities; to combine biodiversity protection with conservation management to provide sustainable resource use; and livelihood development. Yet from the outset, decisions were taken to emphasise the livelihood and protection aspects at the expense of the higher level policy and institutional changes that were necessary and expected, and the management actions that could have encouraged the sustained use of marine resources have been largely overlooked. The results have been impressive where the Project has been enabled to work, yet underwhelming in areas that have been paid lip service to. A definition of political will is the inclination to make changes necessary to meet a particular challenge, yet while the Project has been successful in recruiting the upper echelons of the State Government Administration to its cause, the Government's preferred approach has been to retain existing management mechanisms in the face of technical advice all around it to the contrary. The main innovation has been to establish new coordination structures, but meetings of these have been too infrequent to have made any meaningful effect. In the conservation management sphere, almost no work has been undertaken to try and provide an increase in sustainable marine resource use to offset the lost opportunities experienced by the fisher communities through increased protection measures. Even where the Project has been particularly successful, that is in taking a very long-term view of the problem by providing initiatives to wean the next generation of the fishing communities into alternative and more profitable employment through vocational training courses, progress is set to be sharply curtailed since the Government's sanctioned funding has been inexplicably curtailed (see paragraph 88). It is clear that the State Government remains committed to the Biosphere Reserve, yet only in its own peculiarly conservative way. Taking the opportunity to test innovative yet possibly risky ideas does not appear to be attractive to it. Safe is best – yet missed opportunities abound.

RECOMMENDATIONS

107. The recommendations herewith cannot help with the Gulf of Mannar Project which ended in December 2012 but may help to establish its legacy.

- The independent auditors should examine the issues, decision-making, and apparent failure of the mechanisms connected to the co-financing of this Project as part of the Country Office Audit Plan later in the year (see paragraph 40).
- The UNDP-CO should assist the State Government in passing control of the Trust to the Indian Administrative Service (see paragraph 90).
- The UNDP-CO should assist the State Government in providing the GoMBR Trust with the powers of compliance monitoring through the Environmental Protection Act 1986 (see paragraph 91).
- The UNDP-CO should assist the Trust in examining the feasibility of providing another tier of loans to be available for the expansion of business enterprises (see paragraph 81).
- The UNDP-CO should assist the Trust in examining the feasibility of allocating a proportion of the corpus fund for use in community-based projects (see paragraph 81).

LESSONS LEARNED

108. Only one lessons learned is documented but it is important.

#1 The Project Document is a contract and should be treated as such

The signatures on a Project Document indicate that it is a contractual agreement between those parties. UNDP is the guardian of GEF's interests when it is GEF's implementing body. As such it should take great care, especially during projects that are carried out under the national implementation modality, that changes are not made that undermine the conservation benefits that are intended to come from GEF's financing. If these are tabled and insisted upon by Governments or their representatives and run contrary to GEF's interests, the contractual nature of the agreement should be evoked and, if necessary, a veto raised even if ultimately that means cancelling the project. In the current Project, there are four examples where the basic contractual nature of the Project Document has been clearly broken: i) the State Government's move to provide untraceable in-kind co-financing instead of the traceable cash co-financing it had committed to; ii) the National Government's failure to provide any of the co-financing it committed to; iii) the failure of the State Government to capitalise the Long Term Funding Mechanism for the GoMBR Trust; and iv) the State Government's decisions to ensure that the Project did not bring about a statutory apex decision-making agency for managing the Biosphere Reserve. If the original Project Document had shown a design which was effectively a social development project with some increased awareness and enforcement measures and that had only US\$ 10.5 million in in-kind co-financing from a single body, there is no way GEF Council would have sanctioned US\$ 7.65 million for the Project. UNDP, both the Country Office and the Regional Technical Office, should keep such things in mind.

ANNEX I: TERMS OF REFERENCE FOR END-TERM EVALUATION

INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the *Conservation and Sustainable Use of the Gulf of Mannar Biosphere Reserve's Coastal Biodiversity* (PIMS 568)

The essentials of the project to be evaluated are as follows:

PROJECT SUMMARY TABLE

Project Title:	Conservation and Sustainable Use of Gulf of Mannar's Biosphere Reserve's Coastal Biodiversity			
GEF Project ID:	13013		<i>at endorsement</i> <i>(Million US\$)</i>	<i>at completion</i> <i>(Million US\$)</i>
UNDP Project ID:	IND/99/G31	GEF financing:	7,650,000	7,650,000
Country:	INDIA	IA/EA own:	1,000,000	1,000,000
Region:	Asia and Pacific	Government:	16,965,000	16,965,000
Focal Area:	Biological Diversity	Other:	19,205,000	--
FA Objectives, (OP/SP):	Improve sustainability of Protected Area Systems	Total co-financing:	36,170,000	16,965,000
Executing Agency:	Department of Environment and Forests, Government of Tamilnadu	Total Project Cost:	26735000	25,615,000
Other Partners involved:	Gulf of Mannar Biosphere Reserve Trust, local NGOs	ProDoc Signature (date project began):		7 March 2002
		(Operational) Closing Date:	Proposed:	Actual:
		DECEMBER 2012	JANUARY 2010	DECEMBER 2012

OBJECTIVE AND SCOPE

The overall objective of this project is to conserve the Gulf of Mannar Biosphere Reserve's globally significant assemblage of coastal biodiversity and to demonstrate in a large biosphere reserve with various multiple uses how to integrate biodiversity conservation, sustainable coastal zone management and livelihood development. The focus of the project is on empowering local communities to manage the coastal ecosystem and wild resources in partnership with Government and village-level institutional capacities, stake holders to apply sustainable livelihoods and an independent, Statutory Trust to ensure effective inter-sectoral co-operation in the sustainable conservation and utilization of the GOMBR's biodiversity resources. This seven year project was inaugurated by the Hon'ble Chief Minister of Tamil Nadu in a public function at Ramanathapuram 18th July 2002.

Development objective: Conservation and sustainable utilization of the marine resources by the stakeholders in the Gulf of Mannar Biosphere Reserve are that is a globally significant coastal biodiversity

Project Purpose: Establishment and participatory management of the Gulf of Mannar Biosphere Reserve through the application of strengthened conservation programmes in the core zone of the Marine National Park and enabling sustainable livelihood advancement in the Biosphere Reserve.

Component 1: (a). Establishment and operation of a Project Co-ordination Unit (PCU), (b). Establishment of the GoMBR Trust and (c). Establishment of a Long Term Funding Mechanism

Component 2: Strengthened Marine National Park operations and Park Infrastructure

Component 3: Development of Biodiversity Overlay for the Reserve area

Component 4: Capacity Building at various levels in conservation and sustainable utilization of marine resources

Component 5: Developing and demonstrating sustainable livelihood options

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

EVALUATION APPROACH AND METHOD

An overall approach and method⁴⁵ for conducting project terminal evaluations of UNDP supported GEF financed projects have developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact**, as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (*Annex C: Evaluation Questions*). The evaluators are expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to Gulf of Mannar, Tamilnadu, including the project sites in four project zones in Ramnathpuram and Thuthukudi . Interviews will be held with the following organizations and individuals at a minimum: Forest Department officials, district administration, line departments, officials of the Gulf of Mannar Biosphere Reserve Trust. Key stakeholders to be interviewed will include a) fishing community, b) NGOs, c) Self Help Groups, d) Village Management Committees/Eco-development Committees, members of the Board of Trustees, Project Steering Committee, State Level Coordination committee, District Level Committee, etc., and other relevant stakeholders.

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of this Terms of Reference.

⁴⁵ For additional information on methods, see the Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 7, pg. 16

EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (see Annex A), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, impact and sustainability**. Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in Annex D.

Evaluation Ratings:			
1. Monitoring and Evaluation	<i>rating</i>	2. IA& EA Execution	<i>rating</i>
M&E design at entry		Quality of UNDP Implementation	
M&E Plan Implementation		Quality of Execution - Executing Agency	
Overall quality of M&E		Overall quality of Implementation / Execution	
3. Assessment of Outcomes	<i>rating</i>	4. Sustainability	<i>rating</i>
Relevance		Financial resources:	
Effectiveness		Socio-political:	
Efficiency		Institutional framework and governance:	
Overall Project Outcome Rating		Environmental :	
		Overall likelihood of sustainability:	

PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill. US\$)		Government (mill. US\$)		Partner Agency (mill. US\$)		Total (mill. US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Actual	Actual
Grants								
Loans/Concessions								
• In-kind support								
• Other								
Totals								

MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

IMPACT

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable

reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.⁴⁶

CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of **conclusions, recommendations** and **lessons**.

IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the UNDP CO in India. The UNDP CO will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team.

The Gulf of Mannar Biosphere Reserve Trust/ Project Team will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

Throughout the period of evaluation, the evaluation team will liaise closely with the UNDP Assistant Country Director and Programme Analyst and Trust Director, the concerned agencies of the Government.

EVALUATION TIMEFRAME

The total duration of the evaluation will be **25** days according to the following plan:

Activity	Timing	Completion Date
Preparation	3 days	6 February 13
Evaluation Mission	10 days	16 February 13
Draft Evaluation Report	9 days	24 February 13
Final Report (after incorporating feedback/comments)	3 days	28 February 13

EVALUATION DELIVERABLES

The evaluation team is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
Inception Report	Evaluator provides clarifications on timing and method	No later than 2 weeks before the evaluation mission.	Evaluator submits to UNDP CO
Presentation	Initial Findings	End of evaluation mission	To project management, UNDP CO
Draft Final Report	Full report, (per annexed template) with annexes	Within 3 weeks of the evaluation mission	Sent to CO, reviewed by RTA, PCU, GEF OFPs
Final Report*	Revised report	Within 1 week of receiving UNDP comments on draft	Sent to CO for uploading to UNDP ERC.

*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

⁴⁶ A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: [ROTI Handbook 2009](#)

TEAM COMPOSITION

The evaluation team will be composed of 2 consultants – **international and national**. The international consultant will be designated as the Team Leader and will be responsible for finalizing the report. The consultants shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The Team members must present the following qualifications:

Team Leader: International consultant

1. A minimum of 10 years of working experience in the related field is required
2. Master's Degree (preferably Ph.D.) in the field of natural sciences or social sciences or a subject closely related to integrated natural resource management. In-depth understanding of landscape ecology conservation approaches and community-based natural resource management.
3. Experience and familiarity with assessments of policies, strategies and possess sufficient knowledge of coastal and marine biodiversity conservation issues at the national and local levels is necessary.
4. Highly knowledgeable of participatory monitoring and evaluation processes, and experience in evaluation of technical assistance projects with major donor agencies; previous evaluation/review experience of UNDP-GEF projects is an advantage;
5. Familiar with conservation approaches in Asia either through management and/or implementation or through consultancies in evaluation of conservation projects. Understanding of local actions contributing to global benefits is crucial;
6. Demonstrated ability to assess complex situations, succinctly distil critical issues, and draw forward-looking conclusions and recommendations;
7. Ability and experience to lead multidisciplinary and national teams, and deliver quality reports within the given time.
8. Knowledge of UNDP and GEF

Both consultants should be fluent in English with excellent writing skills. In addition, they should possess excellent computing skills, including MS Word, Excel, Power Point and other related programmes.

EVALUATOR ETHICS

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluations'

ANNEX II : ITINERARY OF ACTIVITIES OF THE FINAL EVALUATION MISSION

Date		Activities
Wed	6 th Mar.	All day: Document review.
Thu	7 th Mar	All day: Document review
Fri	8 th Mar.	am: 1. Meeting with Regional Technical Advisor, UNDP-GEF Bangkok (Mr. Doley Tschering (S)). 2. Document review. pm: 1. Document review.
Sat	9 th Mar.	Lead evaluator travels to India.
Sun	10 th Mar.	am: 1. Lead evaluator arrives in India pm: 1. Meeting with Energy & Environment Programme Analyst, UNDP (Ms. Lianchawii). 2. Travel to Chennai.
Mon	11 th Mar.	am: 1. Travel to Madurai. 2. Travel to Ramanathapuram. 3. Presentation by Chief Conservator of Forests and Director of Gulf of Mannar Biosphere Reserve Trust (GoMBRT) (Dr. R.K. Bharathi); Eco-development Officer (Mr. K. Kaleeswaramorthy); and UNDP Programme Specialist seconded to the GoMBRT Trust (Dr. V. Deepak Samuel). pm: 1. Meeting with Director of GoMBRT (Dr. R.K. Bharathi). 2. Meeting with Programme Specialist (Dr. V. Deepak Samuel). 3. Meeting with GoMBRT Monitoring and Evaluation Officer (Mr. S. Santhanakrishnan).
Tue	12 th Mar.	am: 1. Field visit to Marine Interpretation Centre at Kunthukul. 2. Field visit to Krusadai Island to view anti-poaching facilities and sea-grass beds. 3. Meeting with Anti-poaching Watchers (six people – see Annex III). pm: 1. Meeting with members of two womens' self-help groups in Kweelakarai (24 people – see Annex III). 2. Meeting with Presidents of five Womens' Self-Help Groups at Chinna Ervadi (22 people – see Annex III). 3. Meeting with Presidents of two Mens' Self-Help Groups at Chinna Ervadi (four people – see Annex III). 4. Travel to Thuthukudi .
Wed	13 th Mar.	am: 1. Field visit to Vaan Island to view coral restoration and anti-poaching facilities. pm: 1. Meeting with Director of Sugandhi Devadasan Marine Research Institute (Dr. J.K. Patterson Edward). 2. Meeting with beneficiaries of Vocational training programme at Sundaram Arulraj Hospital (28 people – see Annex III). 3. Meeting with Chief Conservator of Forests, Forest Extension (Southern Region) Madurai and former Director of GoMBRT Trust (Mr. S. Balaji) on logframe issues.
Thu	14 th Mar.	am: 1. Meeting with Chief Conservator of Forests, Forest Extension (Southern Region) Madurai and former Director of GoMBRT Trust (Mr. S. Balaji). 2. Travel to Tharuvaikulam. 3. Meeting with representatives of 10 Womens' Self-help Groups (44 people – see Annex III). 3. Travel to Ramanathapuram. pm: 1. Meeting with District Collector (Mr. K. Nanthakumar). 2. Meeting with beneficiaries of Vocational training programme at Sathya Hospital (19 people – see Annex III). 3. Meeting with repretatives of 16 Self-help Groups in Seeniappa Dhargah village (38 people – see Annex III).
Fri	15 th Mar.	am: 1. Field visit to Olaikuda fish landing centre and location of seaweed culture. 2. Meeting with members of Thangachimadam VMCEDC Federation (seven people – see Annex III).. pm: 1. Meeting with Senior Scientist, Mandapam Camp, Regional Centre of Central Marine Fisheries Research Institute (Dr. A.K. Abdul Nazar). 2. Field visit to Vedhali to view beneficiary of Ornamental fish culture training (Mr. S. Sivaraj). 3. Meeting with Wildlife Warden, Gulf of Mannar Marine National Park (Mr. M. Sundarakumar) and Assistant Conservator of Forests, National Park (Mr. T. Rajendran).
Sat	16 th Mar.	am: 1. Field visit to Casurina plantation at Kunjarvalasai village (with beneficiary Mr. Nagasamy). 2. Meeting with VMCEDC Presidents (10 people – see Annex III). 3. Meeting with Field Project Workers (12 people – see Annex III). pm: 1. Meeting with Director of Arumbugal Trust NGO (Ms. V. Latha Mathivana). 2. Travel to Madurai.

Date		Activities
Sun	17 th Mar.	am: (PE) Free – birding.. pm: 1. Travel to Chennai.
Mon	18 th Mar.	am: 1a. Meeting with UNDP Programme Specialist seconded to the GoMBR Trust (Dr. V. Deepak Samuel). 2. Meeting with Principal Chief Conservator of Forests: Head of Forestry Fund (Mr. Gautam Dey). 3. Meeting with Team Leader of Dhan Foundation NGO (Mr. M. Santhanam). pm: 1. Meeting with Additonal Chief Secretary: Environmant and Forest Department (Mr. Mohan Verghese Chunkath); Principal Chief Conservator of Forests and Chief Wildlife Warden (Mr. Bhagwan Singh); Chief Conservator of Forests and Director of Gulf of Mannar Biosphere Reserve Trust (GoMBRT) (Dr. R.K. Bharathi); Chief Conservator of Forests, Forest Extension (Southern Region) Madurai (and former GoMBR Trust Director) (Mr. S. Balaji); Conservator of Forests, Virudhunagar and Director of Gulf of Mannar Biosphere Reserve (Mr. Ashis Kumar Srivastava); Wildlife Warden, Gulf of Mannar Marine National Park (Mr. M. Sundarakumar); Under Secretary to Government, Environment and Forest Department (Mr. Selvarasau); and Special Secretary: Environment and Forests (Mr. Abbas).
Tue	19 th Mar.	am: 1. Travel to New Delhi. pm: 1. De-briefing meeting with seven participants (see Annex V).
Wed	20 th Mar.	am: 1. Document reviewand report writing. 2. Meeting with Additional Secretary, Ministry of Environment and Forests (Mr. Hem Pande). pm: 1. Document reviewand report writing.
Thu	21 st Mar.	am: 1. Lead evaluator departs India.

ANNEX III : PERSONS INTERVIEWED

(S) = skype interview. Alphabetic order.

UNDP / GEF

Doley Tshering	Regional Technical Advisor, UNDP-GEF (S)
Lianchawii Chhakchhuak	Programme Analyst, UNDP India
V. Deepak Samuel	Programme Specialist for Gulf of Mannar Biosphere Reserve Trust

Project Staff

D. Paviyola (Ms.)	Field Project Worker, Manadapam Zone
E. Lakshmi (Ms.)	Field Project Worker, Ervadi Zone
K. Kaleeswaramorthy	Gulf of Mannar Biosphere Reserve Trust Eco-development Officer
K. Vijayakumar	Field Project Worker, Manadapam Zone
M. Chitraselvi (Ms.)	Field Project Worker, Manadapam Zone
M. Ilaiyaraja	Field Project Worker, Ervadi Zone
N. Murugesan	Field Project Worker, Ervadi Zone
R. Kaliammal (Ms.)	Field Project Worker, Manadapam Zone
R.K. Bharathi	Chief Conservator of Forests and Director of Gulf of Mannar Biosphere Reserve Trust
R. Latha (Ms.)	Field Project Worker, Manadapam Zone
R. Sesurani (Ms.)	Field Project Worker, Manadapam Zone
S. Anthonymuthu	Field Project Worker, Manadapam Zone
S. Balaji	Chief Conservator of Forests, Forest Extension (Southern Region) Madurai and Former Director of Gulf of Mannar Biosphere Reserve Trust
S. Santhanakrishnan	Gulf of Mannar Biosphere Reserve Trust Monitoring and Evaluation Officer
T. Kalaiselvi (Ms.)	Field Project Worker, Manadapam Zone
V. Pachammal (Ms.)	Field Project Worker, Ervadi Zone

National Government

Hem Pande	Additional Secretary, Ministry of Environment and Forests
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Tamil Nadu State Government

Abbas	Special Secretary: Environment and Forests
Ashis Kumar Srivastava	Conservator of Forests, Virudhunagar and Director of Gulf of Mannar Biosphere Reserve
Bhagwan Singh	Principal Chief Conservator of Forests and Chief Wildlife Warden
Gautam Dey	Principal Chief Conservator of Forests: Head of Forestry Fund
G. Palaniselvam	Marin Biologist with the Forest Department-Wildlife Warden
G. Selvarasau	Under Secretary to Government, Environment and Forest Department
K. Nanthakumar	District Collector, Ramanathapuram
Mohan Verghese Chunkath	Additional Chief Secretary: Environment and Forest Department
M. Sundarakumar	Wildlife Warden, Gulf of Mannar Marine National Park
T. Rajendran	Assistant Conservator of Forests, National Park

Project Partners

A.K. Abdul Nazar	Senior Scientist, Mandapam Camp, Regional Centre of Central Marine Fisheries Research Institute
J.K. Patterson Edward	Director of Sugandhi Devadasan Marine Research Institute
V. Latha Mathivana	Director of Arumbugal Trust NGO
M. Santhanam	Team Leader of Dhan Foundation NGO

Community Stakeholders and Beneficiaries

D. Pandiyan	President, Thiraviyapuram VMCEDC, Ervadi zone
J. Arun	Anti-poaching Watcher
K. Karthik	Anti-poaching Watcher
M. John Bose	President, Raja Nagar VMCEDC, Mandapam zone
M. Muniasamy	President, Kilakkuputhu Nagar VMCEDC, Keelakarai zone
Nagasamy	Kunjarvalasai village (beneficiary of forest plantation).
P. Baskaran	President, Pitchaimoopanvalasai VMCEDC, Ervadi zone
P. Mohan	Anti-poaching Watcher
P. Muniasamy	President, Vivekananda Nagar VMCEDC, Mandapam zone
R. Sivakumar	Anti-poaching Watcher
S. Haroon	President, Keelakarai VMCEDC, Keelakarai zone
S. Jayakumar	Anti-poaching Watcher
S. P. Pandi	President, Poopandiapuram VMCEDC, Ervadi zone
S. Sivaraj	Son of ornamental fish breeder (beneficiary of vocational training)
T. Cheenichandiran	Anti-poaching Watcher
T. Gunasekaran	President, Chinna Ervadi VMCEDC, Ervadi zone
Thenmozhi (Mrs.)	President, Vivekananda Nagar VMCEDC, Mandapam zone
V. Irulandi	President, Seeniappadharga VMCEDC, Mandapam zone

Village Marine Conservation and Eco-Development Committee Beneficiaries

CHINNA ERVADI VMCEDC, KADALKANNI WOMENS' SELF-HELP GROUP

J.Fathima	Member
J.Shanmugavalli	Member
K.Chithra	Secretary
K.Muthumuniyayi	Member
S.Mallika	President

CHINNA ERVADI VMCEDC, MANNAR VALAIKUDA WOMENS' SELF-HELP GROUP

M.Muthulakshmi	Member
Ramu	Member
S.Valli	Member
T.Rani	President

CHINNA ERVADI VMCEDC, NIVETHITHA WOMENS' SELF-HELP GROUP

M.Parasakthi	Secretary
M.Vasantha	Member
N. Muthumari	President

CHINNA ERVADI VMCEDC, SIRPI KADALVALA PADUKAPPU MENS' SELF-HELP GROUP

M.Arumugam	President
Sethuraja	Member

CHINNA ERVADI VMCEDC, SRI JANSIRANI WOMENS' SELF-HELP GROUP

A.Nambuchelvi	President
P.Vijaya	Secretary
Sikkander Beevi	Member

S.Panjammal	Member
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CHINNA ERVADI VMCEDC, SRI VEDAVYASAR MENS' SELF-HELP GROUP

M.Andi	President
S.Murugadas	Secretary

CHINNA ERVADI VMCEDC, THILAGAVATHY WOMENS' SELF-HELP GROUP

A.Jeyarani	Secretary
M.Chellammal	Member
M.Nagalakshmi	Member
N.Muthammal	Member
P.Umaieeswari	President
T.Thangammal	Member

KWEELAKARAI VMCEDC, MANAR VALAIKUDA (GULF) WOMENS' SELF-HELP GROUP #4

Aariba	President
Abibaa	Member
Jansirani	Member
Kathirnishia	Member
Mahabooba	Member
Meera	Member
Nabisaththu	Member
Rahmathnisha	Secretary
Raseena	Member
Riswana	Member
Roja	Member
Thaslim	Member

KWEELAKARAI VMCEDC, MANAR VALAIKUDA VALAMPURI (CONCH) WOMENS' SELF-HELP GROUP

Aariba Beevi	Member
Ajitha	Member
Asila Fathima	Member
Asma	Member
Ayisaththu Nooria	Member
Fajidha	Member
Hussaina	Member
Lathiba	Member
Nilofer Nisha	Member
Rubina Beevi	Member
Siddi Hathija	Secretary
Syedu Johara Beenii	President

SEENIAPPA DHARGA VMCEDC: ANBUNAGAR WOMEN'S SELF HELP GROUP

Bharathi	Member
Eluvakkal	Member
Govindammal	Member
Muthu Lakshmi	Member
Ponnammal	Member
Rakkammal	Member
Valarmathi	Secretary
Vellaiammal	President

SEENIAPPA DHARGA VMCEDC: KADAL ALAIGAL (SEA WAVES) MEN AND WOMEN'S SELF HELP GROUP

Muthulakshmi	Member
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SEENIAPPA DHARGA VMCEDC: KADALKUTHIRAI (SEA HORSE) WOMEN'S SELF HELP GROUP

Lakshmi	Member
Maheswari	President
Ponnuthai	Member
Rakkammal	Member
Vasantha	Secretary

SEENIAPPA DHARGA VMCEDC: KADALMEENGAL (SEAFISH) WOMEN'S SELF HELP GROUP

Pasupathi	Member
Revathi	President
Thangalakshmi	Secretary

SEENIAPPA DHARGA VMCEDC: KADALPASU (DUGONG) WOMEN'S SELF HELP GROUP

Chellammal	Secretary
Devi	Member
Indira	Member
Pullani	President
Revathy	Member
Selvi	Member
Sundari	Member

SEENIAPPA DHARGA VMCEDC: KADALVISIRI (SEA FAN) WOMEN'S SELF HELP GROUP

Fousia Beevi	Member
Mohamed Naseema	Member
Noorjahan	President
Sarammal	Secretary

SEENIAPPA DHARGA VMCEDC: MALLIGAI (JASMIN) MEN'S SELF HELP GROUP

Murugan	President
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SEENIAPPA DHARGA VMCEDC: NEHRU WOMEN'S SELF HELP GROUP

Vijaya	Secretary
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SEENIAPPA DHARGA VMCEDC: SEENIAPPA WOMEN'S SELF HELP GROUP

Chithra	Member
Gomathi	Member
Indira	Member
Muniyayi	Member
Muthurakku	President
Ramayi	Member
Vijayalakshmi	Member
Yowan	Member

THANGACHIMADAM VMCEDC FEDERATION

A. Meitha	Andoniyar Puram EDC Member
A.P. Jesu Packiam	Victoria Nagar EDC President
A. Tharma Seeli	Andoniyar Puram EDC President
K. David	Federation President and Savariyar Nagar EDC President
M. John Bos	Raja Nagar EDC President
M. Tharmaputhiran	Raja Nagar EDC Member
R. Jarome Suresh	M.G.R. Nagar EDC President

THARUVAIKULAM VMCEDC: ARIVOLI MINNOLI WOMEN'S SELF HELP GROUP

Iruthaya Thai	Member
L. Arputha Rani	Secretary
Maria Thilaga	Member
N. Vimala	President
Raja Pushpam	Member

THARUVAIKULAM VMCEDC: ARIVOLI SEMPARUTHI WOMEN'S SELF HELP GROUP

Arockia Lalitha	Member
Jerlin	Member
P. Selvam	President
P.Selvarani	Secretary
Savriyai	Member

THARUVAIKULAM VMCEDC: MALIGAI WOMEN'S SELF HELP GROUP

Amutha	Member
Antony Michel Nicholas	Member
R. Thangathai	President
A.Rockiya Maria Selvi	Secretary
Kulanthai Theresa	Member
Mariammal	Member
Maria Thangam	Member
Praveena	Member
Raja Rathinam	Member
Soosai Rathinam	Member

THARUVAIKULAM VMCEDC: NEHRU WOMEN'S SELF HELP GROUP

Gnana Pragasi	Member
Jayakodi	Member
Loruth Noani	Member
N. Gnana Soundari	President
S. Francis Mary	Secretary
Vijaya	Member

THARUVAIKULAM VMCEDC: PUNITHA ANTHONIYAR KALANCHIAM WOMEN'S SELF HELP GROUP

A. Maria Rose Latha	Secretary
Gnana Vimala	President

THARUVAIKULAM VMCEDC SONIYA WOMEN'S SELF HELP GROUP

I. Mani	Member
Jeya Rani	Member
P. Masila Mery	President
S. Mery Stella	Secretary

THARUVAIKULAM VMCEDC: THAMARAI WOMEN'S SELF HELP GROUP

Adaik Tamil Arasi	Member
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THARUVAIKULAM VMCEDC: VAIRAM WOMEN'S SELF HELP GROUP

A.P. Joseph Daisy –	President
Kasithanam	Member
Maria Mathaleh	Member

THARUVAIKULAM VMCEDC: VETRI VOLI WOMEN'S SELF HELP GROUP

Adaikalam	Member
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THARUVAIKULAM VMCEDC: WINNOLI WOMEN'S SELF HELP GROUP

A. Selvam	President
Jecintha	Member
J. Nicholas Mani	Secretary
Rejina Meri	Member
Sahaya Lalitha	Member
Savao Yai	Member
Valarmathi	Member

Vocational training Beneficiaries

SATHYA HOSPITAL, RAMANATHAPURAM⁴⁷, VOCATIONAL TRAINING COURSE

A. Mahalakshmi	Diploma In Health Assistance
B. Usha Rani	Diploma In Health Assistance
K. Banu Priya	Diploma In Health Assistance
K. Muthuraman	Faculty Head
L. Dhivya Banu	Diploma In Health Assistance
M. Muruga Lakshmi	Diploma In Health Assistance
M. Sethu Rani	Diploma In Health Assistance
M. Suganya	Diploma In Health Assistance
M. Surya	Diploma In Health Assistance
M. Uma	Diploma In Health Assistance
R. Saranya	Diploma In Health Assistance
R. Siva Ranjani	Diploma In Health Assistance
R. Vanitha	Diploma In Health Assistance
S. Menaga	Diploma In Health Assistance
S. Sharmila	Diploma In Health Assistance
S. Thenmozhi	Diploma In Health Assistance
S. Umayya Renuka	Diploma In Health Assistance
T. Siva Sangari	Diploma In Health Assistance
V. Sathya Rani	Diploma In Health Assistance

SUNDARAM ARULRAJ HOSPITAL, THUTHUKUDI SAH COMMUNITY COLLEGE VOCATIONAL TRAINING,

A. Gayathri	Diploma In Health Assistance
A. Geethakani	Diploma In Health Assistance
A. Nibaniya	Diploma In Health Assistance
M. Devi	Diploma In Health Assistance
A. Vanaparvathi	Diploma In Health Assistance
Ivan	Community Manager
J. Merina	Diploma In Health Assistance
L. Sudalai Vadivoo	Diploma In Health Assistance
M. Jancy Mary	Diploma In Laboratory Assistance
M. Kalyani	Nursing Tutor
M. Kanaga	Diploma In Health Assistance
M. Panjakili	Diploma In Health Assistance
M. Uma Mageswari	Diploma In Laboratory Assistance
P. Princey	Diploma In Health Assistance
P. Sakthikani	Diploma In Health Assistance
P. Thamarai Selvi	Diploma In Health Assistance
P. Thamilselvi	Diploma In Health Assistance
P. Veera Lakshmi	Diploma In Laboratory Assistance
R. Christina	Nursing Tutor
R. Karthika	Diploma In Health Assistance
R. Subashini	Diploma In Health Assistance
R. Suganthini	Diploma In Health Assistance
S. Kavitha	Diploma In Health Assistance
S. Maris Bastina	Diploma In Health Assistance
S. Muthupriya	Diploma In Health Assistance
S. Sankara Narayanan	Diploma In Laboratory Assistance
S. Thomas Rani	Diploma In Laboratory Assistance
Suriti Malai	Accounts Manager

⁴⁷ Affiliated To Annamalai University, Chidambaram

ANNEX IV : SUMMARY EVALUATION OF PROJECT ACHIEVEMENTS BY OBJECTIVES AND OUTCOMES

The Project logframe in the Project Document was revised in 2009 but was never endorsed by the Project Steering Committee (see paragraphs 18 -19). However, in the absence of anything other than the original logframe designed in 1998, the evaluation matrix this uses 2009 version. The delivery status herein is taken from the most recent information available from the Mr S. Balaji, former Director of the Trust, and UNDP.

KEY:

GREEN = Indicators show achievement successful at the end of the Project.

YELLOW = Indicators show achievement nearly successful at the end of the Project.

RED = Indicators not achieved at the end of Project

HATCHED COLOUR = estimate; situation either unclear or indicator inadequate to make a firm assessment against.

Goal: Globally significant coastal biodiversity in a multiple use area conserved and sustainably utilised by all stakeholders.

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
1	Objective: Conservation policies and practices mainstreamed in GoM region	Improved status of biodiversity in the Gulf of Mannar region	Enhanced coral cover, sightings of marine mammals	Enhanced coral cover by 10%	5.9% increase in live coral cover between 2003 and 2009, but prolonged elevated temperatures in 2010 led to significant bleaching and a 9.6% loss in cover. Subsequent recovery has produced a 13.8% increase over the subsequent two years. Total increase between 2003 and 2012 is 2.2%. In addition, restoration through provision of artificial reefs has added 3 km ² to the existing 78 km ² of healthy reef – 3.85%.	The total reef area is taken as 110 km ² – of which 32 Km ² were considered degraded and 78 km ² healthy.						
2			(Dugong – 2 to 3 sightings per week in Appa Island of Keezhakkarai coast where sea grass beds are luxuriant)	Enhanced dugong sightings in Appa Island (5 sightings per week) and also similar sightings in the nearby islands of Keezhakkarai coast	No quantitative data available; no formal survey or monitoring has been undertaken. The only information available appears to be secondary anecdotal reports from fishermen. Sightings are said to have increased when consulting with Village Marine Conservation and Village Eco-development Committees. Impossible to make an evaluation.	Increase in encounter rate with dugong carcasses said to be a sign of an increase in population, but opposite would appear just as likely. In short, there are no hard data.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
3		Improved productivity of marine resources and economy of local population	Fishing Landings – Approx. 130,000 tonnes during 2008-09 in Gulf of Mannar	Fish production improved by 5%	Figures from Fisheries Department indicate a 7.83% rise from 2008/9 to 2011/12 when a total (artisanal and mechanised) of 140,267 tonnes were landed.	Poor indicator – the increase could indicate increased effort, but no new registrations have been issued for bottom trawlers since 2008 at instigation of the Trust – but see also paragraph 62.						
4	Output 1: Project Management Streamlined, Trust strengthened for greater coordination with all stakeholders, and long term sustainability mechanisms operational	Trust/Foundation established, cross sectoral linkages for coordinating and enforcing coastal developmental activities established.	Insufficient information available on coastal management plans and development activities on the coast	Review Coastal Zone Management Plans with greater emphasis on linkage between conservation and livelihoods	Management Plan of GoMNP approved by Trust, Conservator of Forest Virudhunagar/Director of GoMNP and Wildlife Institute of India March 2010. Linkage with conservation provided through sustainable livelihood options/awareness/capacity building measures and entry point activities (e.g. microfinance)							
5			Limited degree of implementation of environmental conservation and pollution regulations in GOMBR region	Enhanced coordination with other line departments on implementation of environmental conservation and pollution regulations in the GOMBR region	Enhanced coordination said to be being achieved through Statutory Boards meetings of Trustees and through meetings of State Level Coordination Committee, Empowered Sub-committee, and District Level Coordination Committee. These provide increased coordination for planning activities but sectoral interests still predominate, and there remains no power to bring line departments together to provide fully joined up conservation work.	The frequency of the meetings apparently falls below those defined in the statute.						
6			Inadequate information on and awareness of ecosystem services of the Biodiversity of the GoMBR region	Enhance awareness on ecosystem services of GoMBR region across various Departments and communities	Field training visits have been undertaken for line department officials; training conducted on scheduled species; 23 publications have been circulated to all State level line ministries. The District Collector is the Chairman of the District Level Coordination Committee, and as such provides much support at District level.	The ban on bottom trawlers from operating between the islands and the coast, is a major decision taken in 2008 as a result of this work; also coral mining stopped in 2005 and dynamite fishing has declined to zero.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
7		Reporting mechanisms streamlined for better management of GoMBR	Inadequate mechanism of reporting and management of GoMBR	Merging the position of Director Biosphere Reserve and Trust Director for effective implementation	The Directors of the Biosphere Reserve, the National Park, and the Trust remain separate entities. The proposal to merge was turned down by a meeting of Board of Trustees in 2008; because the Trust has special arrangements and wants to remain clear of Government processes to maintain flexibility.	State Govt. comment: Since UNDP funds have ceased, the Trust Director may be made as the Director of the Biosphere Reserve also and the Wildlife Warden can report to the Director of the BR. There is a precedent that the Field Director, Tiger Reserve Area is in-charge for Tiger Foundation also. TET response: Wonderful – progress at last!						
8		Long term financial mechanism and exit strategy developed for GoMBR put in place	No long term financial mechanism and exit strategy in place	Long term financial mechanism and exit strategy developed by end year 2010	Three options were prepared: 1) Trust will be purely a research agency; 2) Trust will be merged with District Collectors who will administer the Trust (i.e. dissolve the trust); 3) Trust will function as a special purpose vehicle which will look after biodiversity research, awareness creation, capacity building and training, and work up sustainable livelihood options through VMCEDCs. A meeting on 11 th October 2011 agreed the third option and allocated about Rs 100,000,000 (US\$ 2 million) for the four-year period 2013-2017.	Note that this is not equivalent to the Long term funding mechanism envisaged and described in the Project Document. Also, note letter reducing options to research and awareness-raising only – see paragraph 88.						
9	Output 2: National Park management strengthened	Management plan prepared and accepted by Government of Tamil Nadu	No management plan for GoMBR region. GOMBR Eco-tourism framework developed by MSSRF	Management plan prepared (esp on ecotourism, restoration, alternate livelihood etc) and endorsed by Government of Tamil Nadu by July 2010	Management Plan of GoMNP approved by Trust, Conservator of Forest Virudhunagar/Director of GoMNP and Wildlife Institute of India March 2010.	Plan is rich in description but poor on prescriptions and does not meet international standards. There is evidence to suggest that the Plan is not being updated every 3 years as it is stated it will be and no evidence to suggest that it is being used to guide the management of the Reserve.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
10		Adequate staff recruited and trained by year 3	Limited trained staff available for GoMBRT	70% of the current staff to be trained by year 2010	100 % of Trust staff trained – together with VMCEDC members they have been given exposure to management concepts through visits to other PAs in Tamil Nadu.	The response here is slightly odd since the output refers to the staff of the Marine National Park and yet they do not appear to have been included.						
11				Additional staff redeployed in GOMBRT and trained	It is assumed that “additional staff” relates to the Forest or Fisheries Department. No additional staff have been made available from Government departments, but two additional posts have been sanctioned within Trust post 2010 – Assistant Director Rural Development and Assistant Director Fisheries.	The indicator is poor – ambiguous and not quantitative.						
12				Staff trained in National Park Management	All MNP staff have been trained in scheduled animals once a year and have been provided with a pictorial field guide. See also #10.	Again, a slightly ambiguous indicator – staff require training only to the level appropriate to their post						
13		Awareness of stakeholders enhanced	Inadequate awareness among the stakeholders about Gulf of Mannar biodiversity and conservation mechanisms	Awareness among school children improved through curricula, field trips, nature camps and teachers trained by year 2010	Between 2010-2012, 74,065 children from 168 educational institutes have been imparted with capacity building and awareness creation lessons.	There is evidence to suggest that children are no having an influence on their parents’ (fathers’) behaviour as a result of this awareness-raising.						
14				Awareness of industries and other developmental sectors enhanced through training programmes, campaigns, newsletters etc by end of year 2010	Effectively no progress. An attempt was made to achieve this through the raised awareness of relevant Government agencies, e.g. Pollution Control Board, but apparently to no effect.	State Govt. comment: Awareness programme was conducted earlier and can be continued. Capacity building of staff from TNPCB and industries can be carried out when funds are assigned. TET response: In that case, one can only wonder again why it was not done during the Project itself.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
15				Community awareness on sustainable use of resource developed by end 2010	This is the primary output of the Trust. Enabling knowledge of primary stakeholders through focal programmes, cultural programmes, and dissemination of research works in abridged Tamil versions. See also #13 above	This awareness raising appears to have resulted in strong local community protest and lobbying for a ban of bottom trawlers in the GoMBR, which was not the case 10 years ago. Fishermen have also been observed directly by staff throwing live by-catch back in the water.						
16	Output 3: National Park infrastructure strengthened	Demarcation of national park boundaries	No demarcation of boundaries	Boundary buoys are installed by the mid 2010	No buoys yet deployed – see paragraph 73.	State Govt. comment: Five buoys deployed at Vembar group of islands TET response: post-evaluation.						
17		Patrolling infrastructure developed	limited patrolling infrastructure available	High speed patrol boats acquired by 2009 and utilised for patrolling in the GoMBR region	Three fibreglass speedboats (with 2 x 150bhp outboard engines) for use as main open water patrols; and two vallams (30ft, inboard diesel engine, traditional, shallow draught wooden craft) ideal for work around islands, have been purchased and fully deployed.							
18		Watch towers/sheds with tele (audio visual) installed	limited patrolling infrastructure available	21 watch towers and tele-equipments installed by June 2010	No towers built. Eight huts/sheds have been constructed for anti-poaching activities (e.g. overnight stay/equipment storage e.g. binoculars) powered by solar panels.							

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
19	Output 4: Protocols for monitoring coastal and marine biodiversity developed	% decrease in heavy metal concentration in samples of water, sediment and organisms	Periodic tests required to know the status of water quality pertaining to GOMBR region not available	Fisheries dept. checks illegal trawling; FD checks illegal trapping of Scheduled Animals; anti-poaching watchers monitor and apprehend violators; TNPCB enforces regulation on industrial & domestic pollution; relevant staff of Fisheries department deployed	All these activities are conducted regularly, coordinated through various Trust Committees. The Trust has often given money for joint patrolling by the enforcement agencies.	Generally this is an odd set of indicators since none of them relate directly to the development of monitoring protocols except perhaps that concerning baseline data. Specifically, this is a strange indicator since most of the target does not relate to the baseline. The TET has been unable to independently verify this information except for that relating to the anti-poaching watchers.						
20		# of offenders identified and preventive detention undertaken	# of offenders for the year 2008	10% reduction of offences by 2010	This is not a simple assessment – see paragraph 74 since patrol boats were purchased and deployed by the Trust/FD in 2009. As a result, the number of offences recorded rose sharply from 6 in 2008 to 27 in 2009 to a peak of 95 in 2010. Since then, the number has fallen to 51 in 2012 – a 47% decrease.	In addition, there have been no recorded incidents of coral mining since 2005.						
21		Habitat restoration (corals, mangroves, sea-grass, pearl oyster beds, chank beds etc)	Restoration efforts are minimal - coral restoration is being attempted	Restoration of habitats of coral, mangrove, sea-grass, pearl oyster beds and chank beds for recovery up to 10% by 2012	Coral – see #1 above. Mangrove – none.. Sea grass – some sea grass plots were created but on a very small scale. For pearl oyster – no restoration work has been attempted, just a single inventory survey. Chank beds have been ignored.							

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
22		Targeted research, management and information programme established	Information on various species in GoMBR area available. However, the population dynamics are not known	Baseline information on various species (most importantly critically endangered and rare ones) completed by December 2010	Inventory of all species in GoM produced but this is a list only and no baseline data attached. No data of any description collected on <u>Dugong</u> . Other rare species thus: <u>Holothurians</u> (sea cucumbers listed as Endangered in the Indian Red DataBook): a two year study undertaken by the Zoological Survey Of India – <i>Status assessment of sea cucumber in Palk Bay and GoM</i> . <u>Molluscs</u> : A study completed on the present status, distribution, and threats to scheduled molluscs and their associated fauna in Mamdapam, Keezhakkarai, and Thuthukudi groups of Islands (i.e three of the four groups of islands). <u>Sponges</u> – Studies were undertaken on the status, diversity and distribution of sponges. <u>Soft corals</u> – Many studies were undertaken on various aspects of the <i>status of coral reefs in the GoM</i> .	It is a pity that the Project found itself unable to undertake even the simplest baseline study on its flagship species, the Dugong. Apparently no country expert on the Dugong is available, which begs the question why an international expert was not employed to undertake the requisite studies with a ToR to include capacity building for an Indian national.						
23	Output 5: Sustainable alternative livelihoods created and demonstrated	Skills and opportunities for non-fishing/alternative livelihoods created and strengthened to reduce pressure on GoM	# of opportunities for marine and coastal resource based livelihood activities are limited in the region	Training of community for at least 25 vocations	Training undertaken for only 22 vocations, but all targeted carefully to provide possibilities for employment in the region. A total of 1,914 beneficiaries had been trained as of Dec 2012, but some courses are continuing until May 2013.	Very weak indicator. The number of vocations is only one factor – the target number of people trained should be provided and be more important.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
24				2 Micro-credits provided to 500 Self Help Groups by end of 2011	Microcredit and revolving funds provided to 2,341 self-help groups (34,699 members) with some beneficiaries reporting having had access to the revolving funds five or six times. By Dec 2012, the VMCEDCs have earned a total profit of IRs. 22 million (US\$ 407,407) on Rs. 77.5 million (US\$ 1.435 million) and returned to VMCEDC funds.	Private money lenders have disappeared from the GoMBR area. Money from the revolving funds cannot be used for community benefits unless agreed by VMCEDC Chairman, and countersigned by the Zonal Officer and Trust Director – see also paragraph 81. Defaults on loans are running at < 1% of total.						
25		Value addition of products from GoM to ensure higher incomes for fisher folk	The facilities to upscale the value addition efforts are limited and capacities to undertake entrepreneurship is poor	10% of the villages in the GoMBR region are successfully undertaking value added enterprise by end 2011	All 248 villages in GoMBR region are in some way undertaking value-added enterprises.							
26		Sustainable fishing practices introduced to reduce by-catch	Enforcing the existing policies and regulations on fishing is limited (esp on TEDs, mesh size etc)	10% of the fishing community use improved fishing devices by end of 2010	No improved fishing devices or gear have been experimented with for eco-friendly fishing except for turtle exclusion devices (TEDs). Fishermen do not want to use TED's because more than 20-25% of their catch escapes along with the turtles thereby producing a catch loss.	Destructive nets like shore seines, push nets, pair trawling and dynamite fishing have been reduced to a considerable extent and fisher folk engaged in these activities are being reported and the FD takes action by seizing the illegal gears used. State Govt. comment: <i>Improved fishing devices or gears will be employed in due course. TET response:</i> More intentions – and these too vague to mean anything.						

#	Objectives	Performance Indicator	Baseline	End of Project Target	Delivery Status at Final evaluation	Comments	HS	S	MS	MU	U	HU
27		Updated sustainable development oriented government social welfare programmes	Current social welfare programmes in GoMBR region do not reflect sustainable development objectives	100 Villages oriented towards sustainable development programmes, such as hygienic fish drying, safe drinking water, sustainable fishing, enhancing market networks in 2010	At least 200 villages now have clean potable water; Trust did one fish shandie (concrete beach platform) but FSD developed improvements in fish landing centre coordinated through Trust DLCC; repeated exposure to marketing agents but most fish sold through local auction so little marketing relevant.							

ANNEX V: LIST OF PARTICIPANTS AT DE-BRIEFING

De-briefing held on 19th March 2013, 15:00-18:00

Participants listed in alphabetic order

Name	Designation
Deepak Samuel	UNDP Programme Specialist for Gulf of Mannar Biosphere Reserve Trust
Lianchawii Chhakchhuak	Programme Analyst, UNDP India
Mohamad Kasim	National Evaluator
Phillip Edwards	Lead Evaluator
Pransod Krishnan	Programme Analyst (Coastal and Marine Projects)
Preeti Soni	Advisor – Climate Change (and former Head of Energy and Environment Unit)
Srinivasan Iyer	Assistant Country Director and Head of Energy and Environment Unit

ANNEX VI: LIST OF PROJECT STEERING COMMITTEE MEMBERS

GULF OF MANNAR BIOSPHERE RESERVE TRUST – Constitution of Project Steering Committee under the Chairpersonship of Chief Secretary as per Government Order:

G.O.(Ms.)No.127 Environment and Forests (FR.V) Department dated: 24.05.2004

1	The Chief Secretary to Government of Tamilnadu, Secretariat, St. George Fort, Chennai – 600 009.	Chairman
2	The Principal Secretary to Government, Environment and Forests Department, Secretariat, St.George Fort, Chennai – 600 009.	Vice – Chairman
3	The Principal Chief Conservator of Forests (Head of Forest Force), No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
4	The Principal Chief Conservator of Forests & Chief Wildlife Warden, No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
5	The Principal Secretary to Government, Finance Department, Secretariat, Fort Saint George, Chennai – 600 009.	Member
6	The Secretary to Government, Animal Husbandry, Dairying & Fisheries Department, Secretariat, Fort Saint George, Chennai – 600 009	Member
7	The Director of Fisheries, Administrative Office Buildings, DMS Complex, Teynampet, Chennai – 600006.	Member
8	The District Collector, Thoothukudi	Member
9	The District Collector, Ramanathapuram.	Member
10	The Wildlife Warden, Gulf of Mannar Marine National Park, Ramanathapuram.	Special invitee
11	Miss. Lianchawii, Programme Analyst, Energy and Environment Unit, United Nations Development Programme, 55, Lodi Estate, PO Box 3059, New Delhi-110 003, India.	Member
12	The Executive Director, M.S.Swaminathan Research Foundation, 3 rd Cross Street, Institutional Area, Taramani, Chennai – 600 113.	Non Official Member
13	The Director, DHAN Foundation, 18-Pillaiyar Koil Street, S.S. Colony, Madurai – 625 016.	Non Official Member
14	The Trust Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member - Secretary

Responsibility

- Approve work plan
- Approve important Management issues

ANNEX VII: LIST OF BOARD OF TRUSTEES OF GOMBR TRUST

GULF OF MANNAR BIOSPHERE RESERVE TRUST – Constitution of Board of Trustee Members and responsibilities as per Government Orders:

1) G.O. Ms. No. 263 Environment and Forests (FR-5) Department dated : 19.12.2000.

2) G.O. Ms. No. 72 Environment and Forests (FR-5) Department dated : 01.06.2005.

1	The Chief Secretary to Government of Tamilnadu, Secretariat, St.George Fort, Chennai – 600 009.	Chairman
2	The Principal Secretary to Government, Environment and Forests Department, Secretariat, St.George Fort, Chennai – 600 009.	Vice – Chairman
3	The Principal Chief Conservator of Forests (Head of Forest Force), No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
4	The Principal Chief Conservator of Forests & Chief Wildlife Warden, No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
5	The Principal Secretary to Government, Finance Department, Secretariat, Fort Saint George, Chennai – 600 009.	Member
6	The Secretary to Government, Animal Husbandry, Dairying & Fisheries Department, Secretariat, Fort Saint George, Chennai – 600 009	Member
7	Sri. Hem Pandey, I.A.S., Joint Secretary to Government, International Co-operation Division, Ministry of Environment and Forests, Government of India, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi – 110 003	Member
8	The Principal Secretary to Government, Rural Development Department, Secretariat, Fort Saint George, Chennai – 600 009.	Member
9	The Secretary to Government, Tourism and Culture Department Secretariat, Fort Saint George, Chennai – 600 009.	Member
10	The Director of Fisheries, Administrative Office Buildings, DMS Complex, Teynampet, Chennai – 600006.	Member
11	The District Collector, Thoothukudi	Member
12	The District Collector, Ramanathapuram.	Member
13	The Chairman, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai – 600 032.	Member
14	The Conservator of Forests, Virudhunagar Circle, Collectorate complex, Virudhunagar.	Member
15	The Inspector General, Commander Coast Guard Region, (East) Coast Guard Campus, Chennai.	Member
16	The Deputy Commissioner, Customs and Central Excise Department, Mandapam Road, Ramanathapuram	Member
17	The Wildlife Warden, Gulf of Mannar Marine National Park, Ramanathapuram.	Special invitee
18	Miss. Lianchawii, Programme Analyst, Energy and Environment Unit, United Nations Development Programme, 55, Lodi Estate, PO Box 3059, New Delhi-110 003, India.	Special invitee
19	Shri.Srinivasa Iyer, Assistant Country Director & Programme Head, Energy and Environment Unit, United Nations Development Programme, 55, Lodi Estate, PO Box 3059, New Delhi-110 003, India.	Special invitee
20	The Executive Director, M.S.Swaminathan Research Foundation, 3 rd Cross Street, Institutional Area, Taramani, Chennai – 600 113.	Non Official Member
21	The Director, Dhan Foundation, 18-Pillaiyar Koil Street, S.S. Colony, Madurai – 625 016.	Non Official Member
22	The Trust Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member - Secretary

Responsibilities:

- Review issues of Co-ordination between departments, work project implementation/solutions
- Co-ordinate priority allocation of programmes/schemes and other interventions.
- Review legal/policy/procedural issues
- Review of external monitoring reports/solutions
- Receive information regarding work plan and progress.

ANNEX VIII: LIST OF MEMBERS OF COORDINATION COMMITTEES ESTABLISHED UNDER THE GOMBR TRUST

STATE LEVEL CO-ORDINATION COMMITTEE

Gulf of Mannar Biosphere Reserve Trust – Constitution of State Level Co-ordination Committee as per Government Order:

G.O.(3D) No.45, Environment and Forests (FR.V) Department dated: 10.12.2003

1	The Principal Secretary to Government, Environment and Forests Department, Secretariat, St.George Fort, Chennai – 600 009.	Chairman
2	The Principal Chief Conservator of Forests (Head of Forest Force),No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
3	The Principal Chief Conservator of Forests & Chief Wildlife Warden, No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Member
4	The Commissioner, Rural Development and Panchayat Raj, 4 th and 5 th Floor, Panagal Building, No.1 Jeenis Road, Saidapat, Chennai - 15	Member
5	The Director of Fisheries, Administrative Office Buildings, DMS Complex, Teynampet, Chennai – 600 006	Member
6	The Commissioner, Commissioner of Agriculture Department, Chepauk, Chennai – 600 005	Member
7	Chief Conservator of Forests & Director, Department of Environment, Ground Floor, No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 15	Member
8	Managing Director, Tamilnadu Tourism Development Corporation, “Tourism Complex”, Wallajah Road, Chennai – 600002.	Member
9	Director, Directorate of Elementary Education, DPI Complex, College Road, Chennai-600 004	Member
10	Director, Directorate of Public Health & Preventive Medicine, 359 Annasalai, DMS Complex, Teynampet, Chennai-600 006.	Member
11	The Executive Director, M.S.Swaminathan Research Foundation, 3 rd Cross Street, Institutional Area, Taramani, Chennai – 600 113.	Member
12	The Director, DHAN Foundation, 18-Pillaiyar Koil Street, S.S. Colony, Madurai – 625 016.	Member
13	Director, Central Marine Fisheries Research Institute, Post Pox No - 1603, Ernakulam North P.O., Kochi – 682 018.	Member
14	Director, Scientist Incharge, Mandapam Regional Centre of CMFRI Marine Fisheries P.O. Mandapam Camp – 623 520	Member
15	The Director, CAS in Marine Biology, Annamalai University, Parangipetti – 608 502, Tamilnadu.	Member
16	Managing Director, Tamil Nadu Water Supply and Drainage Board (TWAD) No.31, Kamarajar salai, Chepauk, Chennai 600 005	Member
17	The Trust Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member

Responsibilities:

- Co-ordinate and facilitate development programmes/schemes of Trust in Gulf of Mannar Biosphere Reserve Trust villages/Towns as per microplan
- Assistant communities/Trust to deal offenders
- share information about any NGO in resource
- Feed back to Empowered Sub Committee, minutes of co-ordination.

EMPOWERED SUB-COMMITTEE

Gulf of Mannar Biosphere Reserve Trust – Constitution of State Level Co-ordination Committee as per Government Orders:

1) G.O.(Ms.)No.127 Environment and Forests (FR.V) Deptmet dated: 24.05.2004

2) G.O. Ms. No. 72 Environment and Forests (FR-5) Department dated : 01.06.2005.

1	The Principal Chief Conservator of Forests & Chief Wildlife Warden, No.1 Jeenis Road, Panagal Building, Saidapet, Chennai – 600 015.	Chairman
2	Miss. Lianchawii, Programme Analyst, Energy and Environment Unit, United Nations Development Programme, 55, Lodi Estate, PO Box 3059, New Delhi-110 003, India.	Member
3	The Conservator of Forests, Virudhunagar Circle, Collectorate complex, Virudhunagar.	Member
4	The Conservator of Forests, Tirunelveli Circle, N.G.O.”A” Colony, Tirunelveli	Member
5	The Wildlife Warden, Gulf of Mannar Marine National Park, Ramanathapuram.	Member
6	The District Forest Officer, 113-A/1 Ettayapuram Road, Polepettai, Thuthukudi 628 002	Member
7	The District Forest Officer, Sivagangai Division, Sivagangai	Member
8	The Divisional Forest Officer, Social Forestry Division, Ramanathapuram	Member
9	The Deputy Director of Fisheries (Regional), Petchiyamman Padithurai, Simmakal, Madurai	Member
10	The Joint Director of Fisheries (Regional), 166-A, North Beach Road, Thuthukudi	Member
11	Representatives of the local committees (Two Presidents of VMCEDCs from each of the two Project districts) Total 4 Nos	Member
12	The Trust Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member - Secretary

Responsibilities:

- Represents Board of Trustees and reports to it.
- Approve purchases of more than IRs 500,000 (US\$ 9,260) by the Trust
- Assist in Choosing NGO
- Examine staff required/solution / remuneration
- Revision of logical frame work of Trust / Budget
- Review Annual Work Plan/Progress reports/Training plan
- Monitoring visits/Audit reports/Monitoring reports
- Research results/revolve conflicts

DISTRICT LEVEL CO-ORDINATION COMMITTEES

Gulf of Mannar Biosphere Reserve Trust – Constitution of two District Level Co-ordination Committees for Ramanathapuram and Thoothukudi Districts as per Government Orders:

1) G.O(3D) No.45, Environment and Forests (FR.V) Department dated: 10.12.2003

2) G.O. Ms. No. 72 Environment and Forests (FR-5) Department dated : 01.06.2005.

1.	District Collector	Chairman
2	The Wildlife Warden, Gulf of Mannar Marine National Park, Ramanathapuram	Member
3	The Divisional Forest Officer, Social Forestry Division	Member
4	Project Officer, District Rural Development Agency	Member
5	Assistant/Deputy Director of Fisheries Department	Member
6	The Joint Director, Fisheries Department, Thuthukudi	Member

7	Assistant Director of Agriculture	Member
8	District Environmental Engineer, Tamil Nadu Pollution Control Board	Member
9	District Tourism Development Officer	Member
10	District Education Officer	Member
11	Joint Director, Health Services	Member
12	Non-Governmental Organisation Representative (M.S. Swaminathan Research Foundation/Dhan)	Member
13	Research Organisation, Central Marine & Fisheries Research Institute (CMFRI)	Member
14	Superintending Engineer/Executive Engineer, Tamil Nadu Water and Drainage Board	Member
15	The Commandant, Coast Guard, Thoothukudi	Member
16	The Deputy Superintendent of Police, Coastal Security Force, Tamil Nadu Police Department	Member
17	The Secretary, Mechanised Boat Owners Association	Member
18	The Secretary, Country Craft Fishermen Association	Member
19	The Secretary from the Non-Governmental Organisation involving in fisheries welfare measure	Member
20	The Dean, Fisheries College, Thoothukudi Research Institute	Member
21	Eco-Development Officer, Gulf of Mannar Biosphere Reserve Trust (GoMBRT)	Member - Secretary

Responsibilities:

- Co-ordinate & Facilitate development programmes / schemes of Trust in Gulf of Mannar Biosphere Reserve Trust villages / Towns as per Micro plan
- Assist communities / Trust to deal with offenders
- share information about any NGO in reserve area
- Feed back to Empowered Sub Committee, circulate minutes for co-ordination.

RESEARCH ADVISORY COMMITTEE

Gulf of Mannar Biosphere Reserve Project – Implementation with assistance of UNDP – Constitution of Research Advisory Committee – orders – issued.

G.O. Ms. No. 72 Environment and Forests (FR-5) Department dated : 01.06.2005.

1	The Trust Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Convener
2	The Eco Development Officer, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member - Secretary
3	The Conservator of Forests, Virudhunagar Circle, Collectorate complex, Virudhunagar	Member
4	The Wildlife Warden, Gulf of Mannar Marine National Park, Ramanathapuram	Member
5	The Deputy Director of Fisheries, Mandapam, Ramanathapuram District	Member
6	The Deputy Director of Fisheries (Regional), Petchiyamma Padithurai, Simmakal, Madurai	Member
7	Bio-diversity Programme Officer, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram	Member
8	Eminent scientists of University nominated by Trust Director – 5 N ^o s.	Member
9	Dr.Eswaran, CSMCRI, Madurai Kamaraj University	Member
10	Dr.Kumaraguru, Madurai Kamaraj University	Member
11	Dr.Kathiresan, Professor, CAS in Marine Biology, Annamalai University, Parangipetti – 608 502, Tamilnadu	Member
12	Dr.J.K.Patterson Edward, Director, SDMRI, Thuthukudi	Member

ANNEX IX: LIST OF PUBLICATIONS PRODUCED BY THE GOMBR TRUST

- 1 *Scientific Information on Gulf of Mannar* – a bibliography.
- 2 “*Azhipudhayal*” - A manual for school / college teacher’s to know about the Biodiversity issue on Gulf of Mannar region In Tamil.
- 3 *Capacity Building in Marine Biodiversity Conservation* – a training manual.
- 4 Capacity building on marine biodiversity – in Tamil.
- 5 *Compilation of Research Papers” Vol. 1* – Output from a National Research and Monitoring Moderation Workshop
- 6 *Gulf of Mannar information guide* – in Tamil.
- 7 *Compilation of Research Papers” Vol. 2* – Output from a National Research and Monitoring Moderation Workshop
- 8 *Capacity Building in Identification of Marine Scheduled Animals* – a manual.
- 9 *Capacity Building in Identification of Marine Scheduled Animals* – in Tamil.
- 10 *Awareness Slogans for Gulf of Mannar* – in Tamil.
- 11 Awards given by GoMBRT – in Tamil.
- 12 Guidelines for VMCEDCs – in Tamil.
- 13 Working pattern of Self-help Groups's – a manual in Tamil.
- 14 *Glimpses of the Gulf*
- 15 *Mannar Matters*
- 16 Information guide – in Tamil.
- 17 Information guide on fishing crafts and gears – in Tamil.
- 18 *Status of Coral Reefs in the Gulf of Mannar Region, Tamil Nadu, Southeast India.*
- 19 *Compendium of Research Findings on Biodiversity Conservation and Sustainable use in Gulf of Mannar Biosphere Reserve Vol. 1.*
- 20 *Pictorial field guide to the marine ornamental fishes of Gulf of Mannar*
- 21 *Compendium of Research Findings on Biodiversity Conservation and Sustainable use in Gulf of Mannar Biosphere Reserve Vol. 2.*
- 22 *Coastal and Marine Biodiversity of Gulf of Mannar, Southeastern India – a comprehensive updated check-list*
- 23 *Common Molluscs of Gulf of Mannar*

ANNEX X: LIST OF SCIENTIFIC RESEARCH PROJECTS UNDERTAKEN BY THE PROJECT

SUMMARY

Sl. No.	Name of the Research Institute	N ^o . of Projects	Cost (IRs. million)
1.	Sugandhi Devadason Marine Research Institute, Thuthukudi (SDMRI).	8	4.625
2.	Fisheries College and Research Institution, Thuthukudi	3	3.943
3.	CAS in Marine Biology, Annamalai University	3	3.118
4.	Alagappa University, Thondi Campus	3	3.030
5.	Institute for Environmental Research and Social Education, Nagargoil.	1	0.758
6.	Manonmaniam Sundaranar University, Tirunelveli.	1	0.734
7.	Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore	1	0.271
8.	Citizen Consumer and Civic Action Group (CAG), Chennai.	1	02.0
9.	CSMCRI, Mandapam	1	0.154
10.	Sarah Tucker College, MS University, Tirunelveli	1	0.192
11.	Ethiraj College, Chennai	1	03.00
12.	Bharathiar University, Coimbatore	1	0.300
13.	Zoological Survey of India	1	0.700
Total		26	18.365

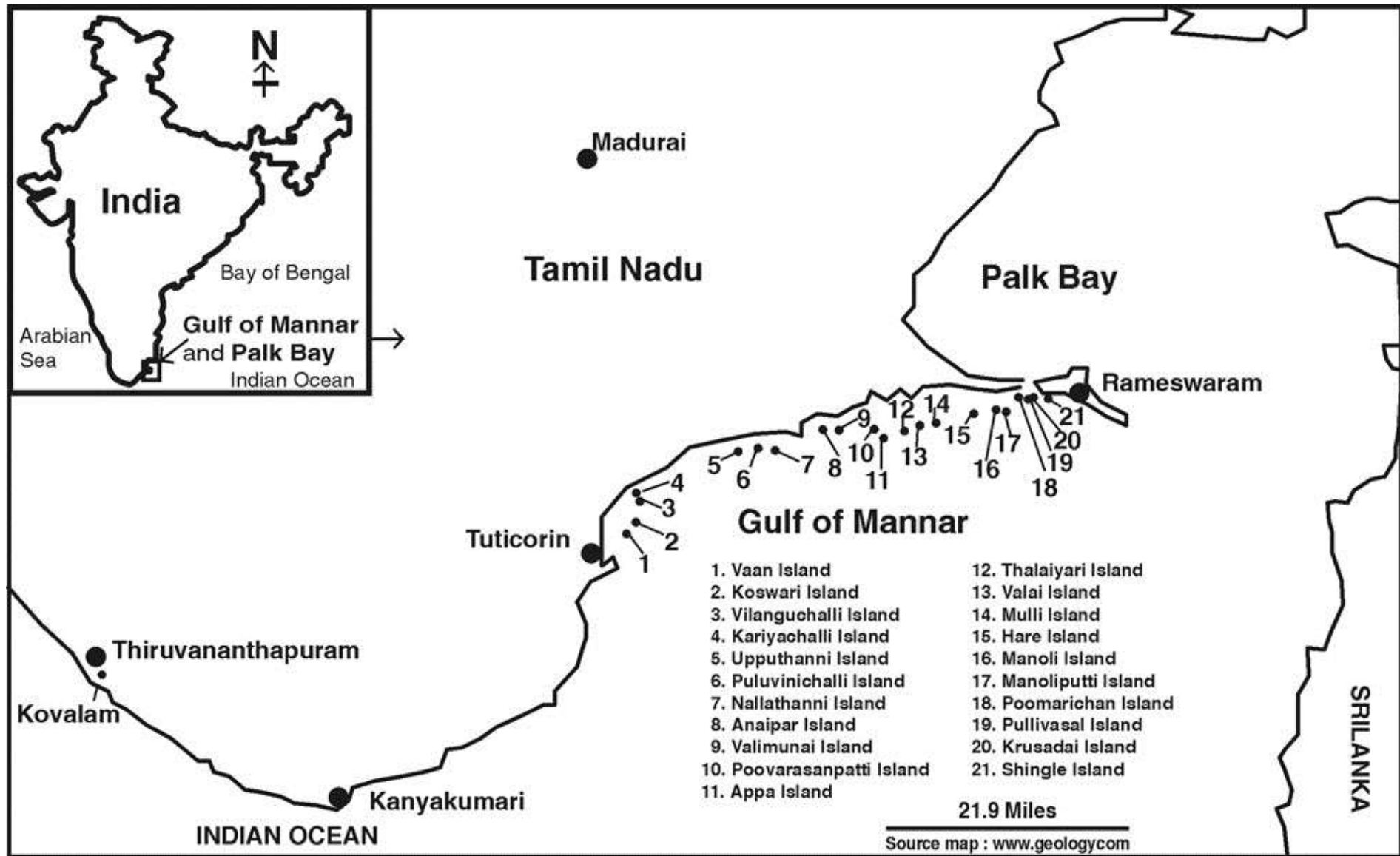
DETAILS

Sl. N ^o .	Year	Details of the Study	Research Institution	Period of Study	Cost (in Rs.)
1.	2006	Review of the Sethusamudram canal project – mitigation and monitoring measures as a management strategy for the Gulf of Mannar.	Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore	Four months	271,000
2.	2006	Assessing and Enhancing Legislative provisions for Natural Resource Conservation in the Gulf of Mannar Biosphere Reserve.	Citizen Consumer and Civic Action Group (CAG), Chennai	One year	240,000
Sub- total 2006					511,000
3.	2007	Analysis of fishing practices of GOMBR.	Fisheries College and Research Institution, Thuthukudi	One year	1,481,000
4.	2007	Marine Ornamental fishery resource assessment in GOMBR.	Fisheries College and Research Institution, Thuthukudi	One year	1,369,130
5.	2007	Study on fish resources of GOMBR their current status, distribution, diversity, abundance, prevailing threats and productivity potential and suggesting future management protocol for biodiversity conservation and sustainable fishing practice for important commercial and non-commercial species.	Fisheries College and Research Institution, Thuthukudi	One year	1,093,000

6.	2007	A detailed survey on Mangrove habitats of GOMBR.	CAS in Marine Biology, Annamalai University	One year	1,090,614
7.	2007	Quality assessment of marine water and sediment in critical locations of Gulf of Mannar.	Manonmaniam Sundaranar University, Tirunelveli.	One year	734,000
8.	2007	To develop a comprehensive check list of biodiversity of flora and fauna of GOMBR.	Sugandhi Devadason Marine Research institute, Thuthukudi	6 months	350,000
9.	2007	Study on the monitoring of coral reef areas in 10 islands of GOMMNP to understand the change in trend.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	676,200
10.	2007	Studies on sea grass productivity and mapping in the GOMBR.	CAS in Marine Biology, Annamalai University.	One year	967,207
11.	2007	Study on sea grass habitat, diversity, abundance and associated fauna in the Keezhakkarai group of island of GoMMNP.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	690,000
12.	2007	Present status, distribution, threats of schedule mollusks and their associated fauna in Mandapam and Killkarai group of Islands.	Alagappa University, Thondi Campus	One year	,96,791
13.	2007	Study on the current status of schedule mollusks in Thuthukudi coast of the Gulf of Mannar Marine National Park.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	368,000
14.	2007	Study on inventorization of soft coral in Mandapam group of Islands of GOMMNP.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	645,150
15.	2007	Soft corals of Vembar and Killkarai group of Islands – a status report.	Institute for Environmental Research and Social Education, Nagarcoil.	One year	758,400
16.	2007	Study on inventorization of soft coral in Thuthukudi group of islands of GOMMNP.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	518,650
17.	2007	Inter-relation between critical and coastal ecosystem: a micro level approach	CAS in Marine Biology, Annamalai University	One year	1,060,185
18.	2007	Study on the inter-relationship (macro level approach that includes resource assessment) between critical habitats and ecosystem found in Gulf of Mannar.	Sugandhi Devadason Marine Research institute, Thuthukudi	One year	626,750
19.	2007	Critical assessment of the pearl oyster status, prevailing threats and develop conservation strategies for management.	Alagappa University, Thondi Campus	Two year	1,657,891
Sub-total 2007					15,082,968
20.	2008	Coral Restoration in 2 islands (Koswari island of Thuthukudi group and Shingle Island of Mandapam group) of GOMMNP.	Sugandhi Devadason Marine Research Institute, Thuthukudi	One year	750,000
21.	2008	Seaweed diversity in the Gulf of Mannar	CSMCRI, Mandapam	1 year	153,500
Sub-total 2008					903,500
22.	2010	Current status & distribution of microbial diversity and macro associated microbial fauna in Mandapam group of island GoMMNP	Alagappa University	1 year	375,000
23.	2010	Preliminary survey of plant-animal interaction and their impact on the recovery of insular flora of the Mandapam group of island in the GoMMNP	Sarah Tucker College, MS University, Tirunelveli	1 year	192,000

24.	2010	Role of microbial chitinase from marine crustacean shell as a source of fungicide and pesticide	Ethiraj College, Madras University, Chennai	2 years	300,000
Sub-total 2010					867,000
25.	2011	Changes in the Socio-economic conditions of fisher folk households – A study on the impact of Vocational training offered by GoMBRT	Bharthiar University, Coimbatore	1 year	300,000
26.	2011	Status assessment of sea cucumber species in Gulf of Mannar	Zoological Survey of India	1 year	700,000
Sub-total 2011					1,000,000
TOTAL					18,364,468

ANNEX XI: MAPS OF GULF OF MANNAR BIOSPHERE RESERVE



ANNEX XII: COMMENTS FROM UNDP-CO

<p><i>A. The Technical Evaluation Team has given an overall rating of ‘Moderately Satisfactory’ to the Gulf of Mannar project. UNDP welcomes some of the suggestions on improving the coastal and marine biodiversity governance in the region; we, however, strongly feel that there is a critical gap in the project evaluation as it has failed to capture some of the vital and larger conservation outcomes of the project. Further, the observations do not fully appreciate the policy and institutional background of the project.</i></p>
<p>TET response: No response made.</p>
<p><i>B. The context in which the project was designed needs to be fully understood. When this project was designed, coastal and marine biodiversity conservation was not a critical priority issue for national and sub-national developmental planning. It was a bold attempt to conceive a project with a vision and strategy that combined a) improved management effectiveness of the marine Protected Area; b) work with local communities on sustainable livelihoods; and b) evolving a cross-sectoral approach to conservation. This was a shift from the then existing strategy which focused inwards on Protected Areas a decade ago. It was a game changing trail of thinking and had wide resonances across the country, particularly on coastal and marine biodiversity conservation.</i></p>
<p>TET response: point included in paragraph 13.</p>
<p><i>C. Against a limited and inflexible policy framework on coastal and marine conservation, it must be appreciated that the project team negotiated this issue through innovative strategies and succeeded to a limited extent on 1) promotion of sustainable use of coastal and marine resources; 2) introducing supplementary livelihood options to reduce conflict over marine resources, and 3) generating evidence and awareness for science based management through the project’s research programme. The project delivered results that influenced the overall thinking on coastal and marine governance not only within the Forest Department but other economic production sectors (e.g. Fisheries) too. GEF is interested in precisely such ‘incremental results’. The Trust officials have been invited to share their experiences on coastal and marine governance on many occasions, including the Bay of Bengal Large Marine Ecosystem, a joint initiative between India and Sri Lanka, and with other agencies such as GIZ, IUCN etc.,.</i></p>
<p>TET response: No response made. Details from final sentence incorporated into paragraph 24.</p>
<p><i>D. Mainstreaming biodiversity conservation considerations in economic decisions requires significant effort. The cross-sectoral platform (GOMBRT) developed under the project is in fact a proactive step in this direction, pulling away from typical sectoral planning frameworks. In this perspective, the creation of GOMBRT itself was a milestone achievement though there is room for evolution in its structure and functions.</i></p>
<p>TET response: point noted and added to paragraph 55 (and Key Successes in Summary) and paragraph 61.</p>
<p><i>E. Influencing upstream policy processes is an uphill task in a country like India, especially in the coastal and marine areas where there is a multitude of stakeholders and aspirations that needs to be tackled and negotiated. Notwithstanding this, this project has contributed to the larger policy processes in the country, including the Coastal Regulation Zone Notification that tries to balance conservation and development in the coastal region. Further, we understand that the Government of India along with UNDP is replicating/piloting similar integrated approaches to coastal and marine conservation in other parts of the country in which the design framework draws significantly from the lessons from GOM.</i></p>
<p>TET response: The TET agrees that influencing upstream policy processes is an uphill task in any country, but that is the aim of the majority of GEF projects: some succeed and some do not. The TET has noted the point in relation to the Coastal Regulation Zone Notification and included it in paragraph 104. However, the final point is somewhat incomprehensible and vague – “we understand ...” suggests a high level of uncertainty; surely if UNDP is involved with this it should know and be able to give the exact details of the examples. That it has not or cannot somewhat undermines the point being made. Had such details been made available to the TET during the mission or even in these comments, they would have been included in the text.</p>
<p><i>F. The link between improved livelihoods and enhanced conservation prospects in the GOM region is an</i></p>

innovative feature. An exhaustive evaluation focusing on qualitative assessment can only bring out the conservation dividends brought in by the project. The TE team needs to factor in this aspect heavily in the report.

TET response: Respectfully, the TET disagrees. Links between livelihoods and enhanced conservation prospects have been around for years and have been included in many projects designed at the same time as this one and after. The Lead Evaluator has seen many where this link has been made far more effectively than here, particularly in relation to providing tangible economic benefits to the local people from conservation, e.g. through eco-tourism, a factor strangely ignored by this Project or the State Government. However, he has seen none to match the scale of the intervention here, as noted in the draft in paragraphs 29 and 105. The TET further disagrees with the assertion that this aspect should be heavily factored into the report – quite the opposite. It is the very concentration on this aspect, to the exclusion of those management and policy aspects, which have weakened the implementation of the original project design – a point made throughout the report. The UNDP-CO’s continuing stance in pushing the livelihoods aspect as a great conservation success is at odds with the TET’s view that, although extensive, the actual conservation benefits remain limited or intangible, and greater conservation benefits would undoubtedly have arisen if the State Government had pursued a policy-centric approach (even without recourse to a management authority).