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***Reversing Environmental Degradation Trends
in the
South China Sea and Gulf of Thailand***

REPORT

**First Meeting of the Regional Working Group for
the Mangrove Sub-component**

Phuket, Thailand, 29 April – 1 May 2002

Table of Contents

1.	OPENING OF THE MEETING	1
1.1	WELCOME ADDRESS.....	1
1.2	INTRODUCTION OF MEMBERS	1
2.	ORGANISATION OF THE MEETING	1
2.1	DESIGNATION OF OFFICERS	1
2.2	ORGANISATION OF WORK	2
3.	ADOPTION OF THE MEETING AGENDA.....	2
4.	TERMS OF REFERENCE, MEMBERSHIP AND RULES OF PROCEDURE FOR THE REGIONAL WORKING GROUP FOR MANGROVES (RWG-M)	2
4.1	TERMS OF REFERENCE FOR THE WORKING GROUP	2
4.2	MEMBERSHIP OF THE WORKING GROUP	3
4.3	RULES OF PROCEDURE	3
5.	MANAGEMENT AND OVERALL OBJECTIVES OF THE UNEP/GEF PROJECT.....	4
5.1	REPORTING RELATIONSHIPS AND RESPONSIBILITIES OF THE REGIONAL WORKING GROUP AND ITS ROLE IN ACHIEVING PROJECT OBJECTIVES.....	4
5.2	FISCAL RESPONSIBILITIES (RECORDING & REPORTING) OF THE NATIONAL FOCAL POINTS OF EACH SPECIALISED EXECUTING AGENCY	5
6.	OVERALL GOALS AND OBJECTIVES OF THE COMPONENT “HABITAT DEGRADATION AND LOSS” AND MANGROVE SUB-COMPONENT	5
6.1	GENERAL DESCRIPTION OF ACTIVITIES CONTAINED IN THE PROJECT BRIEF	5
6.2	OTHER RELEVANT ACTIVITIES IN THE REGION.....	7
7.	DATA AND INFORMATION NEEDS FOR THE MANGROVE SUB-COMPONENT	8
7.1	REVIEW OF THE MANGROVE RELATED SECTIONS OF THE NATIONAL REPORTS AND THE TRANSBOUNDARY DIAGNOSTIC ANALYSIS, PRODUCED DURING THE PREPARATORY PHASE OF THE PROJECT	8
7.2	NATIONAL AND REGIONAL SOURCES OF DATA AND INFORMATION.....	9
8.	DISCUSSION AND ADOPTION OF THE WORKPLANS FOR THE NATIONAL COMMITTEES AND REGIONAL WORKING GROUP FOR 2002-2003.....	9
9.	ANY OTHER BUSINESS.....	9
10.	DATE AND PLACE OF THE NEXT MEETING OF THE REGIONAL WORKING GROUP FOR MANGROVES	10
11.	ADOPTION OF THE REPORT OF THE MEETING	10
12.	CLOSURE OF THE MEETING.....	10

List of Annexes

Annex 1	List of Participants
Annex 2	List of Documents
Annex 3	Agenda
Annex 4	Financial Rules and Financial Reporting Requirements for National Focal Points Operating in the Framework of the UNEP/GEF Project entitled: “Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”
Annex 5	Flow Chart of Actions for the Mangrove Sub-component of the UNEP GEF South China Sea Project
Annex 6	Details of Parameters, Data and Information Requirements for Mangrove Site Characterisation
Annex 7	Examples of Causal Chain Analysis to be used in analysing threats and causes at specific sites
Annex 8	Schedule of Meetings and Workplan for 2002

Report of the Meeting

1. OPENING OF THE MEETING

1.1 Welcome address

1.1.1 The Project Director, Dr. John Pernetta, opened the meeting on behalf of Dr. Klaus Töpfer, the Executive Director of UNEP, and Dr. Ahmed Djoghlaif, the Director, Division of GEF Co-ordination (UNEP/DGEF). He welcomed participants to the first meeting of the Regional Working Group for Mangroves (RWG-M) and noted the high importance accorded this project by UNEP and the GEF. This importance is reflected in the substantial size of the GEF grant (16.4 million US \$). He informed the meeting of the strong desire of UNEP's Executive Director that the project stimulate renewed interest in regional, co-operative management of the most biologically diverse, shallow-water area of the marine environment in the world.

1.1.2 Dr. Pernetta noted further that, the project was large and although it appeared complex it was in reality comparatively simple once the framework was clearly understood. This Working Group is central to the regional level co-ordination and management of the national contributions to the Mangroves sub-component of the Habitat loss and degradation component of the project. He expressed the wish that by the end of the meeting everyone would have a clear idea of the overall scope of the project, and in particular the activities envisaged within the framework of the mangrove sub-component.

1.1.3 The first meeting of the Regional Working Group is of critical importance in providing guidance to the Focal Points for the mangroves sub-component in each country and through them to the National Committees regarding the work to be undertaken and in ensuring that the data and information assembled at the national level are comparable and compatible between all participating countries. It will be important to ensure that the scientific and technical guidance provided by the Regional Working Group is collective, not only at the regional, but also equally importantly, at the national level. Dr. Pernetta expressed his personal best wishes and those of the Executive Director of UNEP and Director of UNEP/DGEF for a successful meeting.

1.2 Introduction of members

1.2.1 The participants and members of the Project Co-ordinating Unit (PCU) introduced themselves, and provided the meeting with a brief outline of their roles in the project, and their expertise and experience relevant to the mangrove activities. The list of participants is attached as Annex 1 to this report.

2. ORGANISATION OF THE MEETING

2.1 Designation of officers

2.1.1 In accordance with the rules of procedure for the Project Steering Committee, participants were invited to nominate a Chairperson, Vice-Chairperson, and Rapporteur for the meeting.

2.1.2 Professor Ong Jin-Eong, invited expert from Malaysia, nominated Dr. Sonjai Havanond, focal point for mangroves in Thailand, as Chairperson of the meeting. Dr. Havanond was duly elected by acclamation.

2.1.3 Professor Hoang Tri, invited expert from Viet Nam, nominated Dr. Hangqing Fan, Focal Point for Mangroves in China, as Vice-Chairperson of the meeting. Dr. Fan was duly elected by acclamation.

2.1.4 Professor Ong Jin-Eong and Mr. Florendo Barangan were nominated and appointed by the meeting as co-rapporteurs.

2.2 Organisation of work

2.2.1 Dr. Pernetta, the Project Director, briefed participants on the list of documents available to the meeting and noted that a number of the information documents were provided in both hard and electronic form. Participants noted with appreciation the extensive preparation for the meeting and the quality of the discussion documents prepared by the Secretariat. The list of documents available to the meeting is attached as Annex 2 to this report.

2.2.2 It was noted that the meeting would be conducted in English and would work in plenary although it might be necessary to form small working groups for consideration of the detail of some agenda items.

3. ADOPTION OF THE MEETING AGENDA

3.1 Dr. Havanond, the Chairperson, introduced the provisional agenda, prepared by the Secretariat as document UNEP/GEF/SCS/RWG-M.1/1, and invited participants to propose any amendments or additional items for consideration.

3.2 Following some clarification of the agenda it was adopted by the meeting, and is attached as Annex 3 to this report.

4. TERMS OF REFERENCE, MEMBERSHIP AND RULES OF PROCEDURE FOR THE REGIONAL WORKING GROUP FOR MANGROVES (RWG-M)

4.1 Terms of reference for the working group

4.1.1 The Project Director introduced document UNEP/GEF/SCS/PSC.1/3 and in particular the Terms of Reference for the Regional Working Group for Mangroves for the project entitled "*Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand*" contained in Annex VIII of that document, and reproduced as document UNEP/GEF/SCS/RWG-M/INF.6. He noted that, the Project Steering Committee, at its first meeting in October, had approved these Terms of Reference but that the working group could, either during this meeting or, during any subsequent meeting, propose amendments to the Project Steering Committee.

4.1.2 The Chairperson invited the meeting to comment on the document and in particular the 14 items that constitute the Terms of Reference for the working group.

4.1.3 Professor Sanit Aksornkoae, invited expert from Thailand, noted that Thailand already had a National Mangrove Committee, which was extremely large and queried whether it was a requirement to create another committee. In response the Project Director informed the meeting that where National Committees already existed it would be preferable to use that committee rather than create a new entity specifically for the project. Given the large size of the National Mangrove Committee in Thailand for which Professor Aksornkoae serves as Vice-Chair, and of which Dr. Sonjai is a member, it was suggested that a smaller working group or sub-committee be formed to oversee and guide project activities, reporting to the National Committee.

4.1.4 During the discussion it was noted that some countries already have National Mangrove Committees (Indonesia, Malaysia, Thailand, Philippines) but that the Malaysian Committee had not met for several years, whilst some countries, in particular those not involved in the UNESCO mangroves project did not have committees. Some new ones may be needed, or existing ones revived. It was noted for example that Vietnam had no National Mangrove Committee but that it had a National Mangrove Working Group that would take responsibility for co-ordinating the mangrove activities under this project.

4.1.5 It was noted further that in the case of China a sub-committee of the National Technical Working Group had been formed in place of a National Committee due to the internal difficulties in creating National Committees as evidenced by attempts in the past to create a National Mangrove Committee.

4.1.6 Mr. Barangan noted that in the case of the Philippines there was a National Mangrove Committee but as in the case of Malaysia it had not met for some time and that responsibility for the Committee had been transferred to the Ecosystems Research and Development Bureau of the Department of Environment and Natural Resources (DENR). He indicated that perhaps the Committee will have to be reorganised and strengthened to work on the South China Sea. On his return, he undertook to contact the research unit to convene and revive the Committee.

4.1.7 Mr. Vongwattana noted that in the case of Cambodia a National Committee had already been formed to co-ordinate the work under the mangroves and wetlands sub-components of the project.

4.1.8 The Project Director noted that the Regional Working Group has responsibility for deciding on the activities, the workplan and timetable, and that, it is the focal points responsibility to ensure deadlines and activities are carried out by their National Committees. During discussion it was noted that the 14 items in the TOR were the collective responsibility of all members of the group and that, they would be assisted in this task, by the Project Co-ordinating Unit.

4.1.9 A query was raised regarding the necessity for convening national committee meetings every month and it was clarified that this schedule, although approved by the Project Steering Committee could be altered according to the requirements of each national committee. It was noted further however that the government in-kind co-financing of the project had been calculated on the basis of the time contributed by members of the national committees and that any reduction in the total length of time devoted to meetings of the committee would result in reduction of the in-kind co-financing contribution. It was possible that smaller groups might be convened on a regular basis with less frequent meetings of the larger National Committees, or that longer meetings of less frequent duration could be convened.

4.1.10 Following this discussion the items under the terms of reference were considered and adopted without change.

4.2 Membership of the working group

4.2.1 The membership of the Working Group as detailed in the Terms of Reference for the Regional Working Group for Mangroves was then considered by the meeting, which noted that, the National Focal Points for Mangroves were automatically members of the RWG-M. The Committee noted with regret that Malaysia had yet to designate a National Focal Point for the Mangrove sub-component of the project and expressed the hope that a Focal Point would be designated in the near future.

4.2.2 The Project Director informed the group that he would serve as the PCU designated member of the Regional Working Group and that he looked forward with pleasure to working closely with the members during project execution.

4.2.3 The meeting noted that four experts from the region could be added to the Committee, and noted further that, Professors Sanit Aksornkoae, Ong Jin-Eong and Hoang Tri had been invited to participate in the first meeting of the Regional Working Group. It was agreed that the group needed to strengthen the economic expertise of the membership. Members agreed to consider both the necessary expertise and possible experts and to advise the PCU of suitable candidates. The working group noted that the limit of four invited expert members was based on meetings costs.

4.2.4 The RWG-M noted that the possibility existed to invite additional experts to meetings or parts of meetings, as required by the business of the group and the items under discussion.

4.3 Rules of procedure

4.3.1 The rules of procedure of the Project Steering Committee contained in Annex XIII of document UNEP/GEF/SCS/PSC.1/3 were then considered by the working group, which adopted the rules regarding the conduct of committee business subject to necessary changes including the replacement of references to the Project Steering Committee by RWG-M.

5. MANAGEMENT AND OVERALL OBJECTIVES OF THE UNEP/GEF PROJECT

5.1 Reporting relationships and responsibilities of the Regional Working Group and its role in achieving project objectives

5.1.1 The Project Director explained the relationship between the National Committees, the Regional Working Group and the Regional Scientific & Technical Committee via document UNEP/GEF/SCS/RSTC.1/INF.4, *"Management Framework and Reporting Structures for the UNEP/GEF Project entitled: Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand."* He noted that, the views, and data and information collated by the National Committees, would be transmitted to the regional Working Group by the National Focal Points. The views of the RWG-M would be transmitted to the Regional Scientific and Technical Committee (RSTC) via the Chairperson of the RWG-M. The RSTC in turn would advise the regional working group on the integration of the mangroves sub-component activities with those undertaken within the other habitat sub-components of the project.

5.1.2 The participants considered the management framework and raised various queries and questions regarding the relationships between the committees and working groups. They noted that the over-riding decision making authority, within the framework of the project, was the Project Steering Committee, which consisted solely of two representatives of each of the participating countries with UNEP serving as the Secretariat.

5.1.3 A question was raised concerning the establishment of the committees at the national level and the inter-relationships between the regional and national structures. It was clarified that the Regional Working Group would co-ordinate and consolidate national inputs across each component and sub-component and the RSTC would serve the purpose of consolidating both the inputs from the component and sub-components, and from the National Technical Working Groups. At a national level the IMC was responsible for the policy level decisions, the NTWG for the scientific and technical decisions, and the National Committees for the activities within each sub-component.

5.1.4 In the case of Thailand it was noted that all committees had been established but that, the National Mangrove Committee referred to in the MoU had not met due to slow transfer of funds between banks. Since the funds had now been received the project sub-committee of the National Mangrove Committee would now be convened. In Vietnam and Cambodia it was noted that all committees had now been formed.

5.1.5 A query was raised regarding the potential for overlap between the Regional Working Group for Mangroves and the Regional Working Group for Wetlands. The attention of the working group was drawn to the report of the first meeting of the Regional Working Group for Wetlands, which had decided to focus its work on coastal saltwater wetlands in three categories, namely estuaries (including deltas), tidal flats and lagoons. The working group noted with concern the absence of a consideration of freshwater wetlands since it was felt that freshwater swamp forest and peatlands were extremely important habitats on the landward side of the mangrove system, which needed to be reviewed. The working group also noted that it would be difficult to separate estuaries and tidal flats from any consideration of areas under the responsibility of the mangrove committees and regional working group.

5.1.6 Mr. Barangan noted that, this issue would be discussed with the National Focal Point for Wetlands in the Philippines and that at the national level they would adjust their work to ensure coverage of all relevant coastal wetlands. The Working group also noted that the wetlands group had not included man-made wetlands within their mandate and that much of the converted mangrove had been changed to shrimp ponds which constituted man-made wetlands.

5.1.7 The working group requested that the issue of potential overlap and absence of freshwater swamps within the mandate of the RWG-W be reconsidered by that group and that they be urged to broaden their scope of work. It was also noted that the Regional Scientific and Technical Committee would need to resolve this matter. In addition, it was agreed that the RWG-M should liaise with the wetlands group (RWG-W).

5.1.8 The Project Director noted that the focus of attention within this project on Mangroves, Seagrasses and Coral Reefs, which constitute “wetlands” in the context of the RAMSAR definition, reflected the regional and global significance of these habitats and that the inclusion of a “wetlands” sub-component had been intended to cover all coastal wetland habitats both fresh and saline excluding the three sub-components detailed above.

5.1.9 Participants also noted the key role of the regional working groups in providing a link between the work of the national committees and the Regional Scientific and Technical Committee at the regional level and the National Level Inter-Ministry Committees (IMC).

5.2 Fiscal responsibilities (recording & reporting) of the National Focal Points of each Specialised Executing Agency

5.2.1 The Project Director provided an overview of the contents of document UNEP/GEF/SCS/RWG-M.1/INF.5 on financial rules and financial reporting requirements to secure anticipated cash flows in accordance with the budgets contained in the MoUs. This document is appended as Annex 4 to this report.

5.2.2 Participants commended the Secretariat on the clarity and simplicity of the document and the reporting requirements, which they felt were a considerable improvement on the rules normally applied by other United Nations organizations.

5.2.3 A query was raised regarding the timing for budgetary revisions and it was noted that revisions to the budgets of the MoUs could be made at any time in consultation with the Project Co-ordinating Unit since the Project Director had delegated authority over the budget within the limits imposed by the project document and the agreements of the project Steering Committee. It was noted that this would be extremely valuable since it would prevent cessation of work due to the need for budget revisions.

5.2.4 During discussion it was clarified that the first six month reports were required at the end of June 2002 but that, due to delays in transfer of funds not all the money in the first tranche would be spent by that time. It was noted that funds could be carried forward for the next six months in accordance with the workplan and timetable to be agreed during the course of this meeting. During discussion it was noted that, the initial evaluation of the six monthly reports was undertaken, by the Project Co-ordinating Unit, but that UNEP headquarters in Nairobi would also, through its internal audit system ensure that, the GEF was getting “value for money”.

5.2.5 Regarding the contracting of services the Project Director noted that members of the National Committee should not be paid for attending meetings but that they could be contracted to provide services additional to those considered within the responsibilities of a member of the committee.

5.2.6 Queries were raised regarding any limits or standards that must be adhered to by the National Focal Points. The Project Director noted that the costs of individual activities such as meetings would vary between countries hence there were not “standard” costs applicable to all countries and that, what UNEP expected was that the Focal Points would make wise use of the resources and attempt to maximize the potential outputs from the budget.

6. OVERALL GOALS AND OBJECTIVES OF THE COMPONENT “HABITAT DEGRADATION AND LOSS” AND MANGROVE SUB-COMPONENT

6.1 General description of activities contained in the Project Brief

6.1.1 The Project Director introduced document UNEP/GEF/SCS/RSTC.1/4, outlining the expectations of the GEF with respect to project execution, and reviewed the constraints and limitations imposed by the terms of the GEF grant in supporting activities in the different project components. Participants noted that although there existed some constraints resulting from the requirements of the GEF, the opportunities provided by this Project were potentially of great significance for the region.

6.1.2 The Project Director then outlined the activities listed in the project brief as summarised in the discussion document UNEP/GEF/SCS/RWG-M.1/4; document UNEP/GEF/SCS/RWG-M.1/5 presenting a proposed draft flow-chart of immediate activities for the National Committees and Regional Working Group, and document UNEP/GEF/SCS/RWG-M.1/6 which presents the outcome of deliberations of the first meeting of the Regional Scientific and Technical Committee with respect to activities in the habitat sub-components of the project.

6.1.3 Mr. Santoso noted the high importance of stakeholder involvement in on-the-ground activities if they were to be successful and in response the Project Director indicated that one member of the PCU, Dr Annadel Cabanban had been appointed on the basis of her extensive experience in community based management since it was recognised that demonstration activities in all components of the project would need to involve all stakeholders from the level of the National Governments down to the level of the communities living in and deriving their livelihoods from the resources contained in potential demonstration sites.

6.1.4 The flow chart of activities at the national and regional level was discussed in some detail and it was agreed by the working group that this presented a clear "road-map" for the activities. The chart is included in Annex 5 to this report.

6.1.5 The Chairperson raised the possibility of including activities relating to carbon fixation in the demonstration sites and it was noted that whilst the focus of the demonstration activities was intended to be biological diversity conservation and sustainable use the "value" of demonstration sites might also need to take into account their value, as sinks of carbon, since it was likely that trade in carbon credits might occur in the future. He further indicated his willingness to assist individuals in preparing submissions to the GEF or other potential sources of funding for activities, which were considered outside the mainstream of the project.

6.1.6 A detailed discussion took place regarding the use of the term "sustainable use" rather than protected areas in the various documents prepared for the project and it was suggested that in this region not only, was no area "untouched" but also, it would be virtually impossible for most governments in the region to designate no-use areas in the face of traditional patterns of ownership and use of coastal resources.

6.1.7 A lengthy discussion ensued regarding the nature and purpose of the demonstration sites to be funded through the project in years 3 to 5. It was noted that there was not a lot of money for individual demonstration sites and that consequently there existed the need to build upon existing mangrove projects at the national level. This had the added advantage of providing existing co-financing and it was noted that a government might wish to propose a particular area as a demonstration site at no cost to the project.

6.1.8 Regarding the purpose of the demonstration sites it was noted that at this stage the budget for demonstration sites had not been allocated to individual activities since this could not be done before the sites had been selected and agreed. However it was noted that a substantial body of funds had been allocated for support to transfer of individuals from one country to the country of the regionally adopted demonstration sites in order to transfer practical experience from one country to another.

6.1.9. It was agreed that demonstration sites could have one or more purposes and that, for example, the longest record of sustainable forest use of mangrove was to be found in Malaysia whilst management regimes in southern Thailand focussed on education and ecotourism. It was noted that the purpose of the demonstration sites needed to be discussed further during a subsequent meeting of the group when, some of the site characterisation had been completed, by the National Committees.

6.1.10 It was further agreed that, the focus should be on "true" mangroves since associated mangrove species may be difficult to agree upon in detail. In the case of "true" mangroves there was a general agreement on the species concerned although it was noted during a subsequent discussion that China, Philippines and Thailand had approved official lists of mangrove species. Whilst it was agreed that Tomlinson, 1986 provided a good basis for work, it was also agreed that the focal points from China, Thailand and Philippines would send to the Project Director their official list of mangrove species and

that he would consolidate these into a proposed list for use within the framework of the project and circulate it to all members of the RWG-M for comment and approval.

6.2 Other relevant activities in the region

6.2.1 The Chairman invited participants to provide information on regional and national activities involving mangrove ecosystems. Dr. Aksornkoae provided some background information on ISME, a global society for which he was the treasurer and it was noted that, the next ISME meeting will be in Vietnam in August. He also brought the attention of the meeting to the Global Mangrove Information System ([www. GLOMIS.com](http://www.GLOMIS.com) website), which contained information on the distribution and information sources relating to mangroves. It was also noted that FAO and IUCN have both produced mangrove publications and data and information reviews, which should be consulted by the group.

6.2.2 The Chairman gave a brief background on the Thailand National Mangrove Committee, which meets every 2 yrs and noted that Thailand also has a National Mangrove Information Network, and that Thailand was in the process of identifying a suitable Ramsar site.

6.2.3 Dr. Jin-Eong told the meeting that in Malaysia, the Forest Research Institute conducts research on mangroves, whilst there is considerable additional research being undertaken by some of the Universities.

6.2.4 Dr. Sam, stated that Vietnam has a significant coastal wetland world bank project. Viet Nam has received funding assistance in the past from DANIDA for mangrove plantations, and more recently Japan has provided assistance.

6.2.5 Mr. Barangan gave a brief review of the status of mangroves in the Philippines. Of an estimated 450,000 hectares at the beginning of the 20th century only about one third is left, but some rehabilitation projects are in progress. They are currently mapping mangroves, as well as potential areas for establishment of mangrove. He noted that In the vicinity of the South China Sea, there are only some small mangrove areas. Palawan in the South has the largest area. Some plantations have been initiated by, NGOs, some by Government, and some by individual communities. Mangrove plantations in the Philippines are now gaining momentum, and those initiated by communities are observed to be successful. The Government may provide materials, but labour is provided by the community.

6.2.6 Mr. Santoso stated that, there are many problems in Indonesia and that accuracy of data is one problem. He cited the fact that in 1982 there were reportedly 4.25 million ha of mangrove which had declined by 1993 to 3.9 million ha, but that in 1999 the figure was reported as being, 8.6 million ha. He explained that this resulted from improper interpretation of satellite imagery, which had resulted in inclusion of non-mangrove vegetation within the overall total.

6.2.7 Mr. Santoso noted further that, fish and shrimp pond development was another problem, with large areas utilised, approximately 1 million hectares. Local communities with no money cut mangroves to make fish ponds. There is a National Draft Strategy to address the issue, but this is still not declared. He noted also that ecotourism is starting in some areas, whilst in West Kalimantan, a project involving local community management of the ecosystem had commenced in 1997 and that potentially this might be a suitable demonstration site within the context of the South China Sea Project.

6.2.8 Mr. Vongwattana noted that in Cambodia two ministries are responsible for mangroves, the Ministry for Agriculture, Fisheries and Forests, and the Ministry of Environment. Mangrove related activities are focused on 3 provinces. DANIDA has provided assistance in the area of mangrove forestry.

6.2.9 China has two departments responsible for mangroves, the National Forest Bureau, and the State Oceanic Administration (SOA). Other departments and local government authorities also have some control and responsibility. He noted that there are extensive publications in China on mangroves, but these are largely pure science and academic research. Even now, China does not know exactly the total area of mangrove. In China remote sensing was not of much use, as small areas of mangroves are missed, but at the same time a lot of mangrove areas are not accessible by road. China therefore will have no problem to collect data for larger mangrove areas, but smaller areas are likely to be overlooked.

China has done some work on economics, but very limited. There is also a large gap on relevant data for management. It is estimated that China has 15,000 hectares total, which is only 30% of original. Recent degradation of Pearl culture is due to the loss of mangroves in this area.

6.2.10 In Hong Kong, 80% of mangroves have been removed, and now there is an ecological reserve for mangroves. Last year China mainland started a 10 year action plan of planting mangroves, but so far a lot of money has been wasted in some places by planting in the wrong environment. All mangrove forest in China is Government owned, not private. Although private companies are interested in investing, for sustainable profit, in managing mangroves on behalf of the government, to date this has not been allowed. In some villages, local people are objecting to conversion of mangroves to ponds. China has no choice, they must protect mangroves for a better future.

6.2.11 Drs. Sam and Hoang Tri noted that, in Viet Nam 5 million hectares of forest, including mangrove, were included in a, rehabilitation programme. Many foreign experts had provided advice and partnerships are developing. It was noted that local people can reserve the land and establish some mangrove fishery, with a percentage of the area (20%) being used for shrimp ponds, whilst the remainder is left as mangrove stand.

6.2.12 The Chairman commented that only 10% of the original mangroves are left in the Gulf of Thailand area. As a result, coastal erosion is now a major problem. Most of the area was converted to fish-ponds, and now there are less fishermen as less fish than before. The shrimp farms now suffer from disease. Along the Andaman coast of Thailand 90% of mangroves remain.

7. DATA AND INFORMATION NEEDS FOR THE MANGROVE SUB-COMPONENT

7.1 Review of the Mangrove related sections of the National Reports and the Transboundary Diagnostic Analysis, produced during the preparatory phase of the project

7.1.1 The Chairperson noted that under the previous agenda item an update of mangrove related activities at the national level had been provided, by the meeting participants. Participants agreed to supply the PCU with metadata relating to sources of data and information, not contained in the published national reports.

7.1.2 The Chairperson suggested, and participants agreed that, they consider in detail the guidance provided by the Regional Scientific & Technical Committee in document UNEP/GEF/SCS/RWG-M.1/6 regarding the data and information required to characterise sites at the national level. The listing provided in this document was discussed at considerable length during which a number of points were raised, a key issue being the extent to which this site characterisation should be applied to all mangroves within each country. It was noted that many small areas of mangrove existed which were probably of too low a significance to merit attention in China, for example. It was agreed that each National Committee would try to make this characterisation as comprehensive as possible and that at the very least all major types of mangroves must be characterised.

7.1.3 Clarification was sought regarding what was intended by "Ecotone" and the Chairperson indicated that this was the area of mixed vegetation, containing true mangroves and species from the neighbouring landward vegetation.

7.1.4 During consideration of the data and information needed to characterize the root causes of problems occurring at specific sites a discussion of causal chain analysis took place during which Dr. Pernetta, and Professor Ong discussed two simple examples of the use of this form of analysis to distinguish between problems which were easily soluble and those which required solutions at a political level. Professor Tri presented two concrete examples and these examples are contained in Annex 6 to this report.

7.1.5 Discussion of issues surrounding economic valuation included problems relating to direct use values, which varied within countries according to the proximity of the site to urban centers of population, difficulties of transferring valuations between countries and the members agreed that they needed an overall framework for economic valuation.

7.1.6 Following initial amendment of the tabulation the meeting agreed to designate a small group to work further on the table during the evening to clarify the units of measurement and provide examples as guidance for the national committees.

7.1.7 The small group presented a revised and expanded tabulation during the morning session, which was further discussed, amended and agreed, as contained in Annex 7 to this report.

7.2 National and regional sources of data and information

7.2.1 The Project Director presented the regional GIS database being developed by the SEA-START Regional Centre in Chulalongkorn University and noted that this would be made available free of charge to all Specialised Executing Agencies contracted within the framework of the UNEP/GEF Project. The meeting accepted the offer of collaboration with enthusiasm and requested the PCU to make arrangements for copies of the GIS database and software on CD ROM to be made available as soon as possible. In this context it was noted that the database that would be made available was in fact, only a sub-set of the entire database and that individual National Focal Points could request specific additional datasets. It was proposed that the PCU liaise with Dr. Snidvongs, Director of the SEA-START Regional Centre, and request a listing of the currently available datasets in order that the National Focal Points could specify those sub-sets that were required.

7.2.2 The Project Director noted that a regional data set regarding coral reef and mangrove habitat distribution in the South China Sea, was contained in the recently released, Reefs at Risk publication and noted that discussions were on-going regarding the incorporation of these data into the GIS database.

7.2.3 It was suggested that the national committees might wish to identify and make available to the PCU and SEA-START RC, publicly available datasets for inclusion in the regional GIS database and noted further that, Dr. Snidvongs had agreed to make arrangements for digitising appropriate datasets where these were available to the National Committees only in hard copy form. The meeting was informed that the South China Sea database was intended as an open access data set based on publicly available materials.

7.2.4 The meeting was informed that the regional meta-database being developed by Chulalongkorn University with financial support from various sources, including the EAS/RCU of UNEP, would contain information regarding the nature of regional datasets, their location, ownership and conditions of access.

7.2.5 The Project Director also informed the meeting that UNEP had recently acquired full global coverage of a one time series of landsat images and that if the National Committees required access to such images they should write to the PCU specifying their requirements and he would facilitate the provision of these images where-ever possible.

8. DISCUSSION AND ADOPTION OF THE WORKPLANS FOR THE NATIONAL COMMITTEES AND REGIONAL WORKING GROUP FOR 2002-2003

8.1 The Project Director noted that the working group had agreed, the flow-chart of activities to be undertaken by the national committees and had finalised the details of the site characterisation which constituted the initial key activity for the National Committees.

8.2 He then introduced the draft workplan for the National Committees and Regional Working Group for 2002-2003 (UNEP/GEF/SCS/RWG-M.1/6) which was discussed and amended and is attached as Annex 8 to this report.

9. ANY OTHER BUSINESS

9.1 No additional items of business were raised.

10. DATE AND PLACE OF THE NEXT MEETING OF THE REGIONAL WORKING GROUP FOR MANGROVES

10.1 The Committee discussed the length of time for the next meeting and agreed that it should be extended to four days and should be convened in the vicinity of a mangrove area that represented a potential suitable demonstration site.

10.2 The dates of the meeting were agreed as 10th to 13th September 2002 inclusive. Following a lengthy discussion of possible locations for the meeting it was agreed that the meeting would be convened in Viet Nam and that the National Focal Point for mangroves, Dr. Sam would liaise with the PCU regarding the administrative arrangements including those for a half day field visit which would be incorporated into the programme for the meeting.

11. ADOPTION OF THE REPORT OF THE MEETING

11.1 The Chairperson presented the draft report of the meeting on behalf of the co-rapporteurs. The draft report prepared by the Secretariat was considered amended and approved, with the exception of item 7.1 as contained in this document.

11.2 The meeting authorised the Secretariat to finalise section 7.1 of the report in consultation with the Chairman. Mr. Barangan moved a formal motion for adoption of the report subject to the additions referred to above. The motion was seconded, by Professor Ong Jin-Eong, and the report was adopted, by the meeting.

12. CLOSURE OF THE MEETING

12.1 The Project Director expressed his appreciation both personally and on behalf of UNEP for the successful outcome of the meeting and the hard, enthusiastic way in which all members had participated in the work of the meeting.

12.2 Professor Ong Jin-Eong proposed on behalf of the participants his appreciation for the hard work of the Secretariat and excellent preparation and support, which they had provided to the meeting.

12.3 The Chairman expressed his appreciation to all concerned for their hard work and support to the successful outcome of the meeting. He declared the meeting formally closed at 1630 on 1st May 2002.

ANNEX 1

List of Participants

Focal Points

Cambodia

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Malaysia

National Focal Point not yet designated

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ANNEX 2

List of Documents

Working documents

UNEP/GEF/SCS/RWG-M.1/1	Provisional agenda.
UNEP/GEF/SCS/RWG-M.1/2	Annotated provisional agenda.
UNEP/GEF/SCS/RWG-M.1/3	Draft report of the meeting (to be prepared during the meeting).
UNEP/GEF/SCS/RWG-M.1/4	Outline of Mangrove Related Activities Described in the UNEP/GEF Project Brief and Project Document entitled: <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> .
UNEP/GEF/SCS/RWG-M.1/5	Flow Chart of Actions for the Mangrove Sub-Component in the UNEP GEF South China Sea Project.
UNEP/GEF/SCS/RWG-M.1/6	Elements for consideration by the Regional Working Groups for habitats in developing criteria for prioritising areas of intervention.
UNEP/GEF/SCS/RWG-M.1/7	Workplan for calendar year 2002.

Information documents

UNEP/GEF/SCS/RWG-M.1/INF.1	Provisional list of documents.
UNEP/GEF/SCS/RWG-M.1/INF.2	Provisional list of participants.
UNEP/GEF/SCS/RWG-M.1/INF.3	Draft programme.
UNEP/GEF/SCS/RWG-M.1/INF.4	Management Framework and Reporting Structures for the UNEP/GEF Project entitled: <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> .
UNEP/GEF/SCS/RWG-M.1/INF.5	Financial Rules and Financial Reporting Requirements for National Focal Points Operating in the Framework of the UNEP/GEF Project entitled: <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> .
UNEP/GEF/SCS/RWG-M.1/INF.6	Terms of Reference for the Regional Working Group on Mangroves (as approved by the First project Steering Committee, Bangkok, Thailand, October 22-23 rd 2001).
UNEP/GEF/SCS/PSC.1/3	First Meeting of the Project Steering Committee for the UNEP/GEF Project <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> . Report of the First Meeting. UNEP/GEF/SCS/PSC.1/3. UNEP, Bangkok, Thailand, 2000.
UNEP/GEF/SCS/RSTC.1/3	First Meeting of the Regional Scientific and Technical Committee for the UNEP/GEF Project <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> . Report of the First Meeting. UNEP/GEF/SCS/ RSTC.1/3 Pattaya, Thailand, 14-16 March 2002.
UNEP/GEF/SCS/RSTC.1/4	Expectations of the Global Environment Facility (GEF) with Respect to Project Execution; Constraints and Opportunities.

UNEP/GEF/SCS/RWG-W.1/3

First Meeting of the Regional Working Group for the Wetland Sub-component of the UNEP/GEF Project entitled: *"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"* **Report of the First Meeting.** UNEP/GEF/ SCS/RWG-W.1/3 *Phuket, Thailand, 24-26 April 2002.*

The following documents are available to participants as both hard copies and on CD Rom

Talaue-McManus, L.	Transboundary Diagnostic Analysis for the South China Sea. EAS/RCU Technical Reports Series No. 14. UNEP, Bangkok, Thailand, 2000.
UNEP/EAS/RCU	National report of Cambodia on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of China on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of Indonesia on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of Malaysia on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of the Philippines on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of Thailand on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.
UNEP/EAS/RCU	National report of Viet Nam on the formulation of a Transboundary Diagnostic Analysis and preliminary Framework of a Strategic Action Programme for the South China Sea. UNEP. Bangkok, Thailand, 2001.

ANNEX 3

Agenda

- 1. OPENING OF THE MEETING**
 - 1.1 Welcome address**
 - 1.2 Introduction of members**
- 2. ORGANISATION OF THE MEETING**
 - 2.1 Designation of officers**
 - 2.2 Organisation of work**
- 3. ADOPTION OF THE MEETING AGENDA**
- 4. TERMS OF REFERENCE, MEMBERSHIP AND RULES OF PROCEDURE FOR THE REGIONAL WORKING GROUP FOR MANGROVES (RWG-M)**
 - 4.1 Terms of reference for the working group**
 - 4.2 Membership of the working group**
 - 4.3 Rules of procedure**
- 5. MANAGEMENT AND OVERALL OBJECTIVES OF THE UNEP/GEF PROJECT**
 - 5.1 Reporting relationships and responsibilities of the Regional Working Group and its role in achieving project objectives**
 - 5.2 Fiscal responsibilities (recording & reporting) of the National Focal Points of each Specialised Executing Agency**
- 6. OVERALL GOALS AND OBJECTIVES OF THE COMPONENT "HABITAT DEGRADATION AND LOSS" AND MANGROVE SUB-COMPONENT**
 - 6.1 General description of activities contained in the Project Brief**
 - 6.2 Other relevant activities in the region**
- 7. DATA AND INFORMATION NEEDS FOR THE MANGROVE SUB-COMPONENT**
 - 7.1 Review of the Mangrove related sections of the National Reports and the Transboundary Diagnostic Analysis, produced during the preparatory phase of the project**
 - 7.2 National and regional sources of data and information**
- 8. DISCUSSION AND ADOPTION OF THE WORKPLANS FOR THE NATIONAL COMMITTEES AND REGIONAL WORKING GROUP FOR 2002-2003**
- 9. ANY OTHER BUSINESS**
- 10. DATE AND PLACE OF THE NEXT MEETING OF THE REGIONAL WORKING GROUP FOR MANGROVES**
- 11. ADOPTION OF THE REPORT OF THE MEETING**
- 12. CLOSURE OF THE MEETING**

ANNEX 4

Financial Rules and Financial Reporting Requirements for National Focal Points Operating in the Framework of the UNEP/GEF Project entitled: *“Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”*

Background

During the first meeting of the Regional Scientific and Technical Committee held in Pattaya, March 22-25 2002 members requested that the Project Co-ordinating Unit provide some notes for guidance of the individuals in the Ministries and Specialised Executing Agencies regarding the management of the funds and reporting requirements. This document has been produced by the PCU in response to that request.

What follows therefore is a simple outline of the budgetary constraints and reporting requirements, rather than a full detailed listing of the United Nations financial rules and regulations.

Budget Planning and approval

The overall project budget was estimated by UNEP on the basis of planned activities approved by COBSEA and the participating Governments. These estimates were summarised in the Project Brief at the time of submission to the GEF Council for approval as total costs for each component and subcomponent of the Project. Hence variations in allocation between components of the Project can only be made with authority of the GEF Council.

Subsequently, during the appraisal phase from December 2000 to October 2001 extensive negotiations were undertaken between UNEP and the Focal Point Ministries in each participating country regarding the allocation of resources to activities within each component. The overall project budget, broken down by object of expenditure in UNEP format was approved by the first Project Steering Committee meeting, held in Bangkok, Thailand, October 22-23rd 2001. This meeting also approved the government commitments of in-kind contributions to the project.

Overall Budget Control

The body with over-riding authority with respect to the entire project budget is the Project Steering Committee, which approves on an annual basis the workplans and budgets for the project. In practical terms what this means is that, at the end of each year the Project Steering Committee decides how any unspent balance should be reallocated, and makes decisions regarding the budget allocations for demonstration sites. The Project Steering Committee must however operate within the framework budget presented in the Project Brief by component and approved by the Global Environment Facility Council at the time of submission of the Project Brief. Effectively this means that the Project Steering Committee has authority to move funds between activities in each component but not to transfer funds from one component to another.

For example: money approved by the GEF as grant support to activities in the coral reef component cannot be transferred to the mangrove component.

The Project Steering Committee has approved the initial budgetary allocations to the Specialised Executing Agencies at National level for the first two years on the basis of which the first instalment of funds has been transferred to all Specialised Executing Agencies with which UNEP has signed Memoranda of Understanding.

Responsibilities of the Specialised Executing Agencies

The responsibilities of the Specialised Executing Agencies are detailed in each Memorandum of Understanding and include *inter alia* responsibility for Chairing and convening meetings of the National Committees, for producing the national inputs to the regional level activities and for advising at the national level, the National Technical Focal Point and National Technical Working Group of priorities

activities which should be undertaken within the framework of the Project. In addition the Specialised Agencies are responsible for presenting the national perspective at the Regional Working Groups and providing to the Regional Working Groups and Regional Scientific and Technical Committee the data and information required to make decisions and recommendations at the regional level. The substantive needs will be more closely defined during the first sets of meetings of the Regional Working Groups.

Disbursement by UNEP to the SEAs

In order to undertake the substantive work described in the MoU's the GEF has provided grant funds for project execution. These monies will be disbursed by ESCAP on behalf of UNEP at six monthly intervals according to the terms given in the MoU. As noted above the first instalment of funds has been disbursed **as a cash advance** following joint signature by UNEP and each SEA, of the MoUs.

In terms of fiscal responsibility within the United Nations System the Project Director authorises financial expenditures including disbursement of funds to the SEAs, in accordance with the project document, and the workplans and budget approved by the Project Steering Committee. The Senior Expert certifies that adequate funds exist to support the payments authorised. These authorities are delegated from the Head of the United Nations Office at Nairobi (UNON), and UNEP headquarters, Nairobi.

Each MoU contains a budget in UNEP format, which indicates the purpose for which the funds are provided by UNEP to the Specialised Executing Agencies. Funds have been allocated in these budgets to the production of the required national level information, for the convening of meetings, for translation and for other purposes as indicated by the UNEP budget code; for example the extract below is taken from the budget table for a National Specialised Agency serving as the Focal Point for Land Based Pollution and represents the anticipated reporting costs. No expenditures on publications are foreseen during 2002 hence these funds will be transferred in 2003 in two separate allotments around January and June 2003.

Table 1. Example extract from the budget for a Specialised Executing Agency acting at National level as the Focal Point for the Mangrove component of the Project (US\$ thousands)

		2002		2003		TOTAL
		1st	2nd	1 st	2nd	
5200	Reporting costs - publications, maps, newsletters, printing.					
5201	Translation			2.00	2.00	4.00
5202	Publication of National Metadatabase & Review			3.00		3.00
5203	Publication of National Management Plan				3.00	3.00
5299	Total	0.00	0.00	5.00	5.00	10.00

Expenditures by the SEAs

Each SEA is authorised under the terms of the MoUs to spend the cash advances in accordance with the detailed budget, which forms part of each MoU. Since the money in the budgets of the MoUs is provided to the SEAs by UNEP in advance of the SEAs incurring any expenditures, UNEP will not reimburse expenditures for items not detailed in the approved budget.

Unplanned costs

In undertaking the work agreed by the Regional Working Groups Specialised Executing Agency may find that they need to spend money on items not currently listed in the budgets of the MoUs. Under such circumstances the Focal Point in the SEA must contact the Project Director to seek changes in the budget to accommodate these un-planned expenditures.

Over-expenditures

Where an item or an activity costs more than originally estimated then the Specialised Executing Agency would need to examine the budget and see whether cost savings can be achieved in other parts of the budget. Any such savings could then be transferred between lines to prevent an over-expenditure occurring. In cases where quotations are obtained which exceed the allocations the Focal Point should contact the PCU to arrange for a revision of the budget. Such a revision should be completed before the over-expenditure is incurred. Focal Points should note that reallocation of funds between lines, which fall into the same component (i.e. 5000 numbers) is generally accepted automatically, but reallocation of funds from 2000 to 3000 lines for example should only be done with the agreement in writing of the Project Director.

Under-expenditures

At the end of a six-month period the Specialised Executing Agency might find that the anticipated costs of a particular activity have been less than originally planned. For example in the Table presented above the SEA might find that only 1,800 US\$ had been spent on translation by June 30th 2003, hence 200 US\$ would remain unspent in budget line #5216. This money can be carried forward on the same budget line if for example it was expected that the costs of translating of the second publication would be more than the planned 2,000 US\$. Alternatively the unspent funds can be reallocated internally, for example to produce more copies of the publication, subject to the approval in writing of the Project Director. In this case the funds would be removed from budget line #5216 and reassigned to budget line #5217 or #5218 as appropriate.

Revising the budget

In the event that unplanned expenditures, under-expenditures or over-expenditures are foreseen the Focal Point in the Specialised Executing Agency is advised to contact the Project Co-ordinating Unit promptly to seek a budget revision, since as noted above UNEP cannot reimburse expenditures which are not part of the approved budget contained in the MoU.

Reporting requirements

At the end of each six-month period the SEA is required under the terms of the MoU to provide three documents to the Project Co-ordinating Unit as follows:

- Six Monthly expenditure statement
- Cash advance request.
- Six monthly progress report

Without these three documents the Project Co-ordinating Unit cannot authorise the cash advance for the next six months.

The six monthly expenditure statement should report the actual expenditures which have occurred up to the 30th June and 30th December in the form provided in an Annex to the MoU and reproduced here as Table 2. At this time any under expenditures will become apparent and a revision of the budget may be undertaken as necessary.

At the same time that the SEA reports the actual expenditures for the previous six months it completes a **cash advance request** in the form annexed to the MoUs and reproduced here as Table 3. This constitutes a request from the SEA to UNEP to advance monies against the expenditures anticipated in the next six months.

Supporting documentation for expenditures

If an item of equipment has been purchased, then the **original receipt for payment must** be dispatched with the six monthly expenditure statement, since until the time of completion of the project the equipment remains the property of the United Nations (Transfer to the partner institution is normally automatic on completion of the project).

If a consultancy contract has been issued for a specified piece of work then a **copy of the signed contract** should also be supplied with the expenditure statement, together with a **copy of the original product** produced by the consultant.

If expenditures are incurred in organising a meeting then a copy of the report of the meeting and any substantive outputs must be supplied to UNEP.

If travel by air has been paid for then an original receipt must be supplied with the expenditure statement.

Whilst UNEP does not require that original receipts for all expenditures be submitted at the time the expenditure report is dispatched **they must be retained by the Specialised Executing Agency** until such time as the external audit report of the organisation has been submitted to, and receipt acknowledged by, the PCU. Ideally receipts should be retained on file until completion of the project and financial closure of the MoU. In the event of an audit the Specialised Executing Agency **may be** required to produce the original receipts by the United Nations auditors.

It is strongly recommended therefore that each SEA retain original documentation demonstrating the nature of each expenditure until such time as the terms of the MoU have been fulfilled.

Substantive Reporting

One further report is required from each SEA on a six monthly basis. This is the Six Monthly Progress Report in the form as annexed to the MoUs and attached here as Table 3. In this report the substantive activities and outputs of the SEA and National Committees are detailed and it is on the basis of this report together with the substantive outputs (copies of which should be sent to the PCU) that UNEP judges whether or not the terms of the Memorandum have been met in a satisfactory manner.

Without the six monthly expenditure report, the six monthly progress report and cash advance request the PCU cannot authorise any subsequent cash advances. It is important therefore that the Focal Points adhere as closely as possible to the reporting requirements in order to ensure a steady flow of funds and smooth operation of the project.

Table 2
FORMAT OF SIX MONTHLY PROJECT EXPENDITURE ACCOUNTS FOR SUPPORTING ORGANIZATIONS
Project statement of allocation (budget), expenditure and balance (Expressed in US\$) covering the period

Project No.:.....

Project title:

Project commencing:..... (date)

Supporting organization.....

Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand

Project ending:..... (date)

Object of expenditure in accordance with UNEP budget codes	Project budget allocation for the half year ending	Expenditure incurred for the half year ending	Unspent balance of budget for the half year ending
	Amount (1)	Amount (2)	Amount (1-2)
1100 Project personnel 1101 1200 Consultants 1201 Consultants etc. etc. etc. <i>(USE OBJECTS OF EXPENDITURE IN ACCORDANCE WITH THE SIGNED MEMORANDUM OF UNDERSTANDING)</i>			
99 GRAND TOTAL			

Signed _____
Designation: _____
Duly authorised official

NB: The expenditures should be reported in line with the specific object of expenditures as per project budget.

File ID: K:\FORMATS\APP4\SOQE.WQ1 me\ag

Table 3
CASH ADVANCE REQUEST

Statement of cash advance as at _____

And cash requirements for the six month period ending _____

Name of co-operating agency/ Supporting organization _____

Project No. _____

Project title: **Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand**

I Cash Statement:

1. Opening Cash Balance as at _____ US\$ _____
2. Add: cash advances received
Date: _____ US\$ _____
Date: _____ US\$ _____
Date: _____ US\$ _____
Date: _____ US\$ _____
3. Total cash advanced to date US\$ _____
4. Less: total cumulative expenditures incurred US\$ _____
5. Closing cash balance as at _____ US\$ _____

II Cash requirements forecast

1. Estimated disbursements for period ending _____
2. Less: closing cash balance (item 5, above)
3. Total cash requirements for the period ending _____

Prepared by _____ Request approved by: _____

Name: _____

Duly authorized official of co-operating
agency/ supporting organization

Table 4

UNITED NATIONS ENVIRONMENT PROGRAMME
SIX MONTHLY PROGRESS REPORT

SECTION 1 - BACKGROUND INFORMATION

1.1 Project Title: Reversing Environmental degradation in the South China Sea and Gulf of Thailand.

1.2 MOU Number: _____

1.3 Responsible Office: South China Sea Project Co-ordination Unit, Bangkok

1.4 Specialised Executing Agency (Supporting Organization):

1.5 Reporting Period: (the six months covered by this report) _____

1.6 Focal Point Name: _____

SECTION 2 - PROJECT STATUS

2.1 Status of the Implementation of the Activities and Outputs Listed Under the Workplan in the Memorandum of Understanding (check appropriate box)

☐ Project activities and outputs listed in the Project workplan for the reporting period have been materially completed and the responsible Office is satisfied that the project will be fully completed on time (give reasons for minor variations as Section 3 below).

☐ Project activities and outputs listed in the Project Workplan for the reporting period have been altered (give reasons for alterations: lack of finance; project reformulated; project revisions; other at Section 3 below).

☐ Project activities and outputs listed in the Project Workplan for the reporting period have not been fully completed and delays in project delivery are expected (give reasons for variations in Section 3.1 and new completion date in Section 3.2 below).

☐ Insufficient detail provided in the Project Workplan.

2.2 List Actual Activities/Outputs Achieved in the Reporting period: (check appropriate box)

(a) **MEETINGS** (Duplicate this box for each meeting individually)

☐ Inter-Ministry mtg ☐ Expert Group Mtg. ☐ Training Seminar/Workshop ☐ Others

Title: _____

Venue and
dates _____

Convened by _____ Organized by _____

Report issued as doc. No/Symbol _____ Languages _____ Dated _____

For Training Seminar/Workshop, please indicate: No. of participants _____ and attach
annex giving names and nationalities of participants.

(b) **PRINTED MATERIALS** (Duplicate this box for each printed item)

☐ Report to IG Mtg. ☐ Technical Publication ☐ Technical Report ☐ Others

Title: _____

Author(s)/Editor(s) _____

Publisher _____

Symbol (UN/UNEP/ISBN/ISSN) _____

Date of publication _____

(When technical reports/publications have been distributed, **attach distribution list**)

(c) ☐ **TECHNICAL INFORMATION** ☐ **PUBLIC INFORMATION** (posters, leaflets, broadcasts etc.)

Description

Dates _____

(d) **SERVICES**

Description

Dates _____

(e) **OTHER OUTPUTS**

SECTION 3 - PROJECT DELIVERY

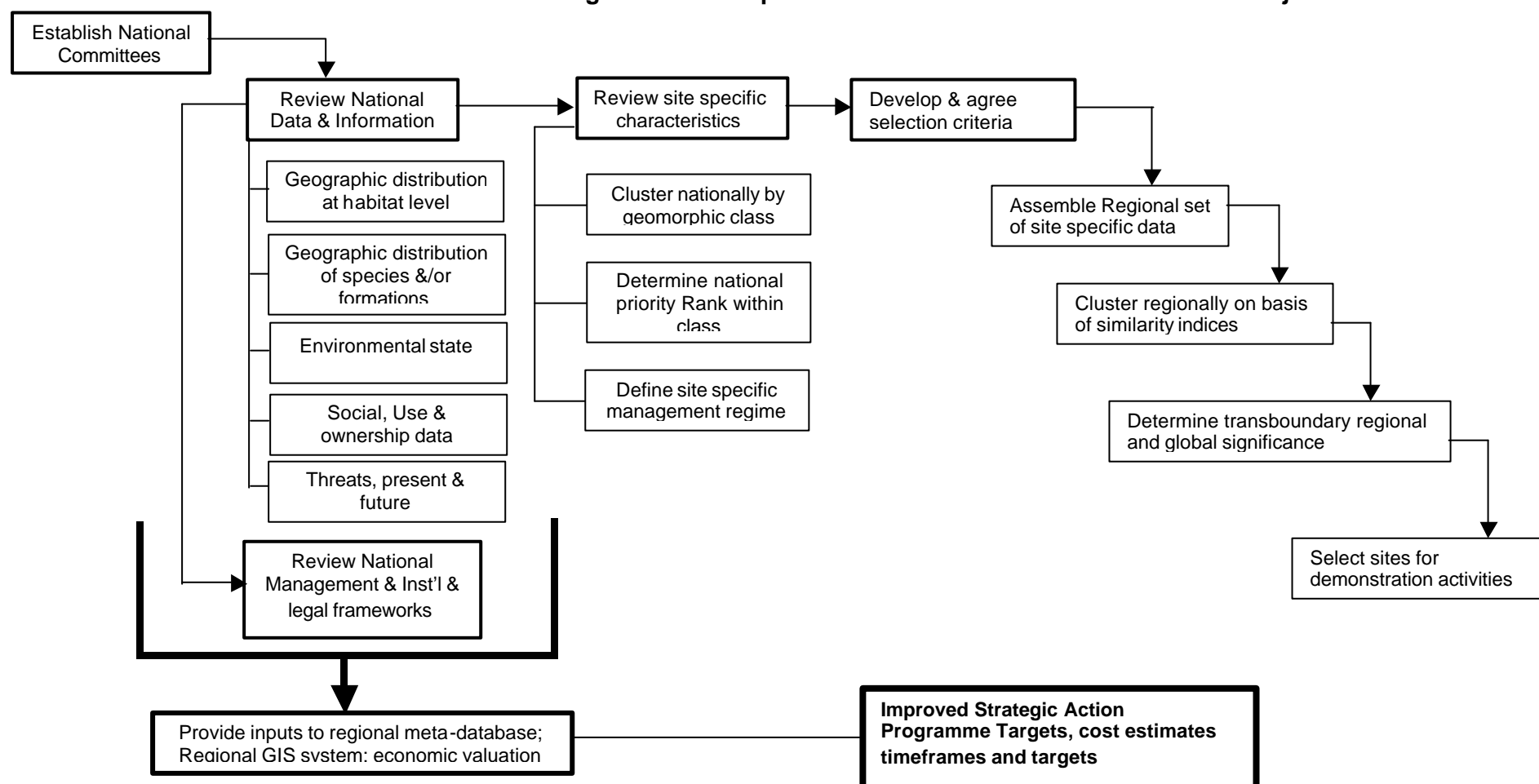
3.1 Summary of the Problems Encountered in Project Delivery (if any)

3.2 Actions Taken or Required to Solve the Problems (identified in Section 3.1 above)

Signed: _____
Name: _____
Designation: _____

ANNEX 5

Flow chart of Actions for the Mangrove Sub-component of the UNEP GEF South China Sea Project



ANNEX 6**Details of Parameters, Data and Information requirements for Mangrove Site characterisation****Mangrove: location name**

	Parameter	Data & Information needed	Remarks
Geographic information	Co-ordinates	Latitude & Longitude central position of areas <50 Ha; GPS Boundary or number (min 4) of paired co-ordinates for larger areas; end points for linear strips.	Include a map if available
	Area	(Units Km ² or Ha)	
Physical Environment	Substrate (soil)	Proportion of sand, silt, clay	
		Bulk Density	
	Freshwater regime	Mean monthly rainfall (mm)	Specify length of records
		Mean monthly River discharge (m ³ sec ⁻¹)	Specify length of records
	Tidal regime	Range (m)	
		Diurnal, semi-diurnal, mixed	
	Slope	Degrees (tangent)	
	Temperature	Mean, max, min, monthly (°C)	Specify length of records
	Soil Salinity	Range (psu)	Landward and seaward edges
	Water quality	Total suspended solids	
		Contaminant concentration/flux	
		Other parameters as available	
	Geomorphic class	Description, lagoon, tidal flats, estuaries, islands etc.	
state information	Present status	Vegetation Canopy Cover (% area)	
	Pressure (threats) – present	% loss of species or area or canopy cover in last five years	Provide maps if available
	Pressure (threats) – future	Estimated future losses from known development plans	
Social & use information	Ownership	Description: Federal, State, Community, private	
	Management regime	Description: Land-use planning, Institutional framework, stakeholder co-ordination, forestry practices, restoration replanting, stakeholder investment, fishery practices.	Description

	Current use	Description: Commercial, subsistence	Quantitative description of current uses e.g. fisheries (annual weights); forest products (annual coup);
	Potential use	Alternative livelihoods	
	Significance/national importance	Use designation in national/state master plans	
Biological data	Natural/Managed	Proportions of total area natural and replanted	
	Species diversity	(True) Mangrove ¹ tree species Density (no ha ⁻¹)	
		Crustacea – Crab genera, density	
		Molluscs – Bivalve genera, density	
		Molluscs – gastropods genera, density	
		Fish – Residents, species abundance	
		Fish – Transient for breeding, species abundance	
		Mammals, resident	
		Birds, resident species	
		Birds, migratory species	
		Reptiles, resident species	
		List others as available (eg mud lobster)	
	Genetic diversity		Unlikely to be available
	Heterogeneity	Formations – number of canopy layers (strata)	Regeneration
		Average and range Height m, by species	
		Average and range Girth, cm by species	
		Zonation – number of zones by dominant species	
		Ecotones – average width m, major species	
	SCS Endemic species	List species and abundance	
	Endangered or threatened species (IUCN criteria)	List species and abundance if data available	
Stress-pressure Information	Intrinsic/internal sources of change	resident human population	
		Natural e.g. frequency of typhoon throw, change in allocthonous sediment inputs, marine based flooding	

¹ Tomlinson, P.P.. 1986 *Botany of Mangroves*, Cambridge University Press.

	Extrinsic/external sources of change	Changes in catchment basin e.g. dam construction water diversion etc.	
	Rates of change, historical review	Rates of loss of cover and/or species over the period 1990-2000	Longer period if available
	Social and economic drivers of change in environmental state	Description, quantitative if possible e.g. pop'n growth, immigration, income/livelihood, demand/ consumption, management regime)	
Economic valuation²	Values of direct use	Timber, charcoal, living marine resource extraction Yr 2000 local currency total	Provide median 2000 US\$ exchange rate
	Values of indirect use	Carbon sequestration, ecotourism, nursery areas for shrimps Yr 2000 local currency total	
	Values from environmental services	Coastal protection, sediment stabilisation, water quality enhancement, contaminant sink, reduction of wave energy & erosion,	Shadow valuation, Avoided costs
	Value of investment	Restoration, replanting	
	Values of potential (commercial) sustainable use		
	Total Economic Value	Yr 2000 local currency total	
Causal Chain analysis			See Annex 7

² Barbier, E.B. 1997. *Economic Valuation of wetland: A guide for policy makers and planners*. RAMSAR Convention Bureau, IUCN.

ANNEX 7

Examples of Causal Chain Analysis to be used in analysing threats and causes at specific sites

Background to Causal Chain Analysis

A causal chain analysis is a linear approach to analysing the proximate and ultimate or, root causes of observed environmental issues or problems in a specific location. Whilst such an analysis can be conducted for a wide geographic area the end results do little more than identify general areas of intervention either at the level of issue or problem or at the level of cause.

When such an analysis is conducted at the scale of a specific intervention it provides information regarding the best point of intervention along the chain, and at which point maximum benefit can be derived for minimum cost.

Example 1 Algal blooms in the Adriatic Sea

The first example involves algal blooms in the Adriatic Sea, which result in unsightly algal deposits on tourist beaches which in turn result in reduced tourist income. A secondary effect resulting from increased nutrients is eutrophication, increased BOD and reduced availability of dissolved oxygen in the water column, which results in wide-spread fish and invertebrate kills resulting in loss of fisheries income and changes in biological diversity.

The immediate cause of the problem is increased nutrient availability in the water column derived from two sources, agricultural fertiliser run-off and discharge of untreated domestic wastes including sewage. Of the two run-off of fertiliser from the intensive rice production of the Po valley is the dominant source of nutrient input. This in turn reflects excessive fertiliser use, poor agricultural practices and the artificially low price of fertiliser due to government subsidy and the common agricultural policy of the European Union. Whilst some environmental improvement could be effected via changes in fertiliser use and agricultural practices the key to effecting change in this instance involves a change in government policies, which remove the subsidy on fertilisers, which in turn requires a change to the common agricultural policy of the European Union. Effecting change at the level of policy within the European Union requires changes involving all member states of the Union not merely the ones impacted by the observed loss of environmental quality.

The discharge of untreated sewage whilst it represents a significant source of nutrient input which is widespread along the coast of the Adriatic is less significant than agricultural run-off hence intervention in this chain of cause and effect will have less impact in terms of reducing nutrient loads than intervention in the agricultural sector.

This example illustrates three significant points:

- firstly the need to identify the primary causes and rank their importance where more than one source is involved;
- secondly the need to identify the precise points of intervention that will have the greatest effect; and,
- thirdly, that some causes may be beyond the capacity of the involved countries to address, since they involve countries outside the area of impact, i.e. they are transboundary at the policy level.

Table 1 Examples of causal chain analysis from the Mediterranean and Sabah, Malaysia

Environmental domain				Socio-Economic Domain			
Environmental Issue or Problem	Causes of observed environmental problem						
	Immediate Cause	Level 2 Cause	Level 3	Level 4	Level 5	Level 6	Ultimate or root cause
Algal blooms (Adriatic sea)	Increased nutrients	Agricultural runoff (Po River)	Excessive fertiliser use	Poor agricultural practices	Low price	Govt. subsidy	Common Agricultural policy of the EU
		Discharge of sewage	No treatment	Lack of capital	Political will		
Loss of Mangroves (Sabah)	Clear felling	Demand for Wood chips	Export income				
		Forestry Policy					

Example 2 Mangrove loss in Sabah

The second example concerns the loss of mangrove in Sabah, Malaysia due to clear felling for the production of wood chips used in Rayon production in Japan. Clear felling is permitted under the governments forestry policy hence changes in forestry policy limiting coup size might result in a reduction in the scale of overall impact. The licensing agreements permitted under the government's forestry policy are driven by a government desire for export income in hard currency which in turn is used to support government development objectives in the social services sector, but are also driven by the private sector profit motive. In this particular example the political consequence of the environmental impacts was a change in government resulting in a cessation of the felling operation.

Example 3 Conservation of Coastal Wetlands in the Red River Delta, Viet Nam

The form of presentation of this example is somewhat different from the first two since the purpose of the analysis in this case is specifically to identify the types and form of possible interventions. The direct threats are linked to the underlying causes, which in turn are linked to the form of possible interventions. The overall environmental problem is the loss of biological diversity in the Red River delta a system of regional and global significance. Five direct causes for loss of biological diversity are identified: excessive hunting and fishing; contamination and pollution from aquaculture; inappropriate plantation policies; and enclosure of mangrove areas for aquaculture. The underlying causes of these include information and policy failures at the local and central government levels.

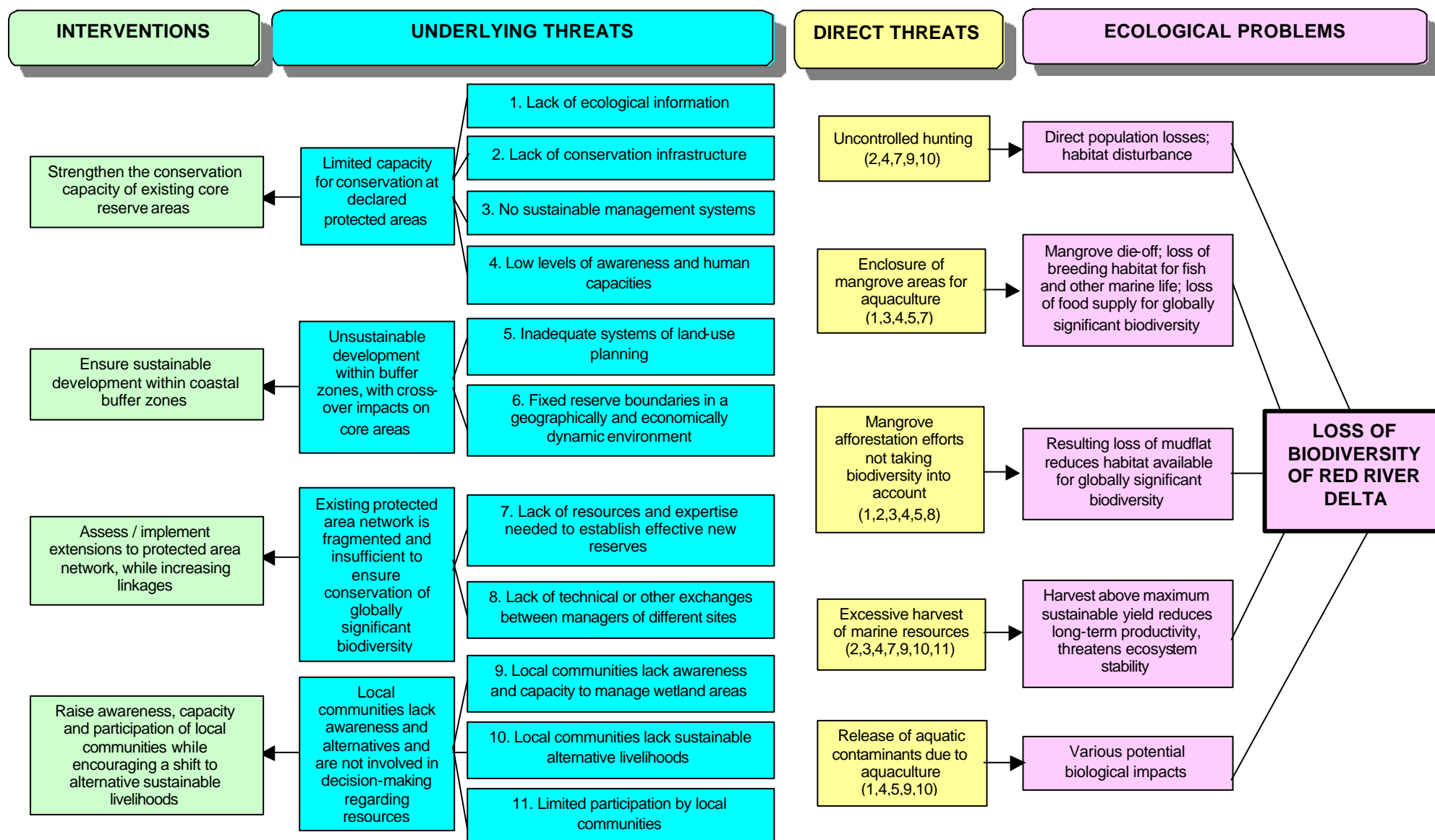
Example 4 Conservation of Upland Biological Diversity in Yunnan, Myanmar

As in example 3 the form of this analysis is designed to identify and link the proposed interventions with the causes both direct and underlying, of loss of biological diversity in the Yunnan Upland areas. In this case the absence of a policy framework and adequate mechanisms for enforcement are the predominant causes of the observed losses of biological diversity.

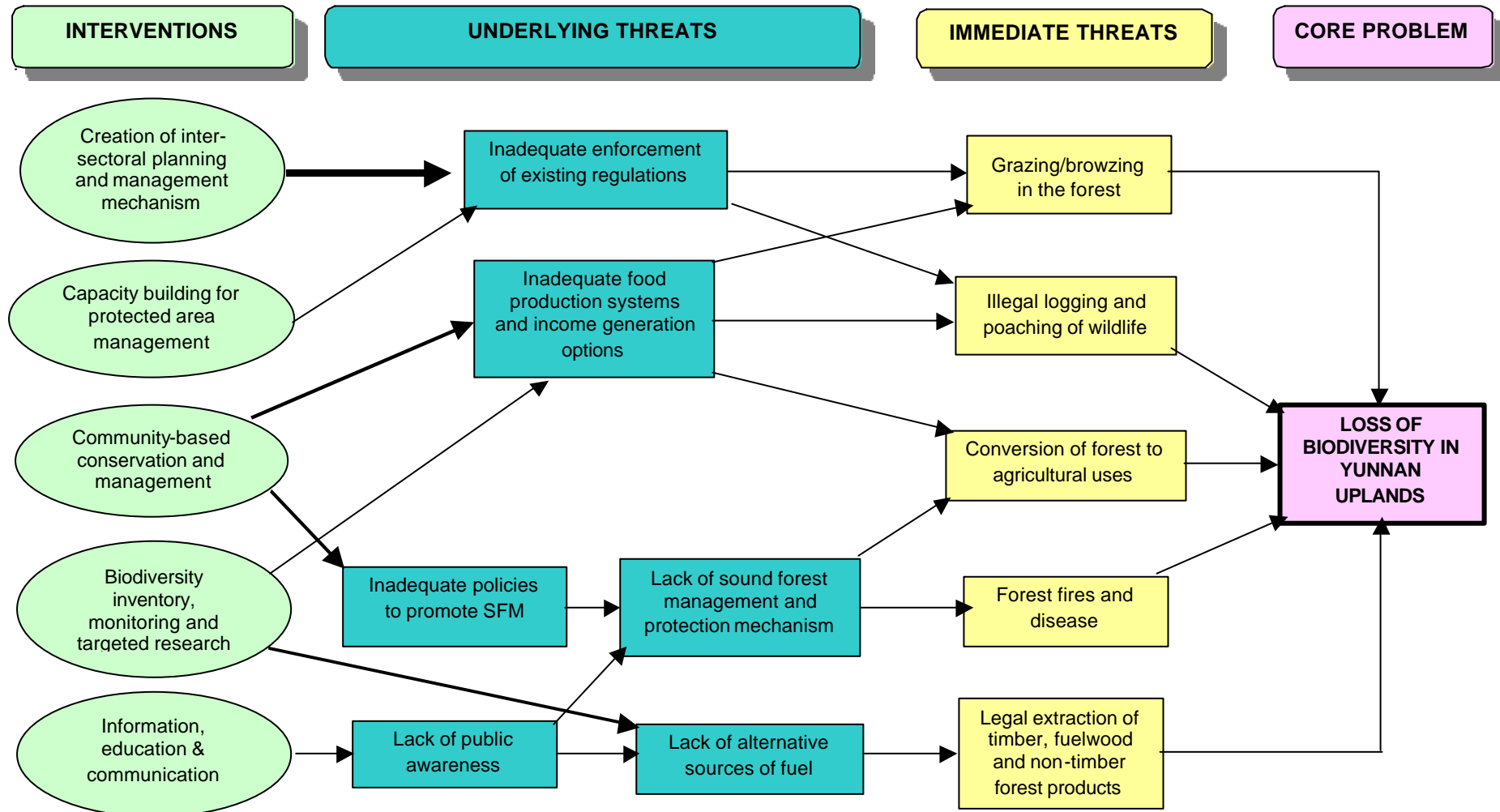
Conclusion:

Once the site characterisation has been completed a causal chain analysis needs to be completed for each site that identifies the key environmental issues, problems or threats and their causes prior to conducting a cost benefit analysis for each potential intervention. A clear identification of the relative importance of each identified problem and the comparative importance of each cause in the case of problems with multiple causes choices regarding the priority interventions can be made.

CONSERVATION OF COASTAL WETLANDS IN THE RED RIVER DELTA: CONCEPTUAL MODEL



CONSERVATION OF UPLAND BIODIVERSITY IN YUNNAN: CONCEPTUAL MODEL



ANNEX 8

Schedule of Meetings and Workplan for 2002

Table 1 Schedule of Meetings for 2002

	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T												
January		1	2	3	4	5		6	7	8	9	10	11	12		13	14	15	16	17	18	19		20	21	22	23	24	25	26		27	28	29	30	31						
February						1	2		3	4	5	6	7	8	9		10	11	12	13	14	15	16		17	18	19	20	21		22		23	24	25		26	27	28			
March						1	2		3	4	5	6	7	8	9		10	11	12	13	14	15	16		17	18	19	20	21	22	23		24	25	26	27	28	29	30	31		
April	1	2	3	4	5	6		7		8	9	10	11	12	13		14		15	16	17	18	19	20		21	22	23	24	25	26	27		28	29	30						
May				1	2	3	4		5	6	7	8	9	10	11	12	13	14	15	16	17	18		19	20	21	22	23	24	25		26		27	28	29	30	31				
June						1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16		17	18	19	20	21	22		23	24	25	26	27	28	29	30				
July	1	2	3	4	5	6		7	8	9	10	11	12	13		14	15	16	17	18	19	20		21	22	23	24	25	26	27		28	29	30	31							
August					1	2	3		4	5	6	7	8	9	10	11		12	13	14	15	16	17		18	19	20	21	22	23	24		25	26	27	28	29	30	31			
September							1	2	3	4	5	6	7		8	9	10	11	12	13	14	15		16	17	18	19	20	21		22	23	24	25	26	27	28	29	30	31		
October			1	2	3	4	5	6		7	8	9	10	11	12	13		14	15	16	17	18	19		20	21	22	23	24	25	26		27	28	29	30	31					
November						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		17	18	19	20	21	22	23		24	25	26	27	28	29	30	31				
December							1	2	3	4		5	6	7		8	9	10	11	12	13	14	15		16	17	18	19	20	21		22	23	24		25	26	27	28	29	30	31

Official United Nations Holidays in Thailand

Table 2 Workplan and Timetable for completion of agreed activities in the Mangroves Sub-component: 2002

[illegible]

Table 3 Workplan and Timetable for completion of agreed activities in the Mangroves Sub-component: 2002 - 2003

Year	2002				2003			
Quarter	1st	2nd	3 rd	4 th	1st	2nd	3rd	4th
National Committee meetings								
NTWG Meetings	X			X		X		X
Review National Reports								
Review Regional database and respond								
Review of ongoing projects & activities								
Creation of National metadatabase								
Identification & characterisation of "sites"			1 st draft	Final draft				
Review National Criteria & priorities								
Review economic valuation data & information								
Review threats at site level & prepare causal chain analyses								
Review National legislation								
Review national level management regimes								
Identify proximate to ultimate cause by source								
National Prioritisation								
Identify priority points of intervention								
Evaluate barriers and possible solutions								
Finalisation of elements of the SAP								
Preparation/revision of the National Action Plan								
Regional Criteria development								
Development of Regional Priorities								
2 nd , 3 rd & 4th meetings RWG-M			X		x		x	
Finalisation of the Regional SAP								