

**TRAT PROVINCE DEMONSTRATION SITE
SUMMARY SHEET**

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| 1. | SITE NAME AND GEOGRAPHIC CO-ORDINATES: | Trat Province, Thailand Latitude 12° 11' - 12° 5' N Longitude 102° 31' - 102° 39' E |
| 2. | COUNTRY IN WHICH THE SITE IS LOCATED: | THAILAND |
| 3. | STATE OR PROVINCE IN WHICH THE SITE IS LOCATED: | Trat province Local government approval [yes or no]:.....yes.....if yes then date <u>March 17th 2004</u> Local government involvement [yes or no].....yes Local government co-financing [yes or no].....yes.....if yes then in-kind or in-cash? <u>In-kind</u> |
| 4. | LINKAGE TO NATIONAL PRIORITIES, ACTION PLANS AND PROGRAMMES: | <p>-Kung Kraben Bay Royal Development Study Centre, Chantaburi Province. The project will build on the experience and outcomes of the many studies and research on mangrove and shrimp farms, which can be applied in Trat mangrove.</p> <p>-Koh Chang National Park ecotourism promotion. Tourists visiting Koh Chang who are interested in natural habitats will be encouraged to visit the mangrove habitat study areas in Trat.</p> <p>-Strengthening communities network, public awareness programme, public participation scheme and restoration scheme. All of these existing provincial programmes will be enhanced by, the demonstration site in term of improving the condition of mangrove resources and improved capacity of people in community-based mangrove management.</p> <p>-The project will enhance local people's participation base on knowledge both in terms of conservation and biodiversity. It will promote the conservation action plan and sustainable resources development of the country</p> <p>Central government involvement [yes or no].....yes Central government co-financing [yes or no] yes if yes then in-kind or in-cash?.....<u>In-cash and In-kind</u></p> |
| 5. | DATE OF NATIONAL TECHNICAL WORKING GROUP MEETING WHICH CONSIDERED THE PROPOSAL AND RECOMMENDATION: | Initial approval on 25 th September 2003 |
| 6. | NATIONAL FOCAL POINT AND/OR NATIONAL TECHNICAL FOCAL POINT ENDORSEMENT AND/OR COMMENTS: | <p>Comments: This proposal will support one of the best replanting and people participation projects for natural mangroves in Gulf of Thailand. It is our first priority among the demonstration site proposals.</p> <p>Signature:</p> <p>Name & Designation: Date:</p> |

DEMONSTRATION SITE PROPOSAL

7. SITE DESCRIPTION:

AREA: 9,245 ha mangrove in the entire Trat Province

7.1 ENVIRONMENT:

The demonstration site is focused on the Tatapao/Namchieo conservation forest area, which consists of a large area of intertidal mudflats around the shore of the shallow marine bay that forms the estuarine system of the Trat River. The area supports an extensive mangrove forest and some aquaculture ponds on loamy sand substratum. The water regime is complex, with distinct variations in turbidity and salinity influenced by seasonal variations in the amount of fresh water entering via the river and by direct run-off from the land. The tidal regime is of a mixed type, with a range extending from 2.2-3.0 m above the lowest low water. A tropical monsoon climate is the dominant environmental influence. From April to November the mean temperature ranges from 26° – 29°C (min 21.7° – max 33.8°C) and the relative humidity ranges from 66.0 - 89.0% (minimum in December and maximum in September). The pH of water in the bay is quite variable, with a range of 4.4 – 7.6 being typical, and the variation in salinity is extreme, ranging from 0 – 31.1 ppt. Dissolved oxygen levels are in the range 4.4 – 7.6 mg/l; electrical conductivity is between 27.5 – 4.8 µs/cm; and turbidity is between 0.5 – 1.3 NTU. These parameters are not extreme, but nevertheless represent a challenge in eco-physiological terms.

7.2 HABITAT(S):

The Trat mangrove forest is located in the easternmost area of Thailand where the coastline is inundated by diurnal tides. All the mangrove areas here are tidal flats showing no mud lobster (*Thalassina anomala* Herbst.) mounds. There are 5 species associations in the forest: *Avicennia-Sonneratia*, *Rhizophora*, *Bruguiera*, *Ceriops*, and *Lumnitera-Excoecaria-Xylocarpus*, which together consist of 20 genera and 33 true mangrove species and 36 associate mangrove species (Tables 1 and 2 of Annex 1). Important mangrove species found in the forest include large-leaved mangroves (*Rhizophora mucronata*), small-leaved mangroves (*R. apiculata*), *Ceriops decandra*, *C. tagal*, *Bruguiera sexangula*, *B. parviflora*, *Xylocarpus* spp. and *Lumnitzera* spp. 32 species of crustacean are recorded from mangrove habitats in this province together with 55 species of fish.

122 species of birds have been recorded in the general area (surveyed in Koh Chang National Park) (Table 3 of Annex 1). Among these, 95 are resident species such as the Pacific reef egret (*Egretta sacra*), the white pigeon water hen, (*Amaurornis phoenicurus*), green imperial pigeon (*Ducula aenea*) and oriental pied hornbill (*Anthracoceros albirostris*). 22 are non-breeding migratory species including the little heron (*Butorides siriatus*) and the greater sand-plover (*Charadrius leschenaultii*). Two species are breeding migratory species: the hooded pitta (*Pitta sodida*) and the blue-winged pitta (*P. moluccensis*), and the remaining 3 species, the blue and white flycatcher (*Cyanoptila cyanomelana*), blue-throated flycatcher (*Cyornis rubeculoides*) and eastern crowned warbler (*Phylloscopus coronatus*), are migratory species at other seasons of the year. The only critically endangered species in Thailand observed here is the brown moody (*Anomus stolidus*), and the great crested tern (*Sterna bergii*) is the only endangered species. The spot-breasted laughing thrush (*Garrulax merulinus*) is the only vulnerable species in the area. The threatened species include the brahmyn kite (*Haliaeetus indus*), white-bellied sea-eagle (*Haliaeetus leucogaster*), edible-nest swiftlet (*Aerodramus fuciphagus*), plain-pouched hornbill (*Rhyticeros subruficollis*), pied imperial pigeon (*Ducula bicolor*) and great hornbill (*Buceros biconis*). Other noteworthy species are the yellow-vented bulbul (*Pycnonotus goiavier*), large-tailed nightjar (*Caprimulgus macrurus*) and Pacific swallow (*Hirundo tahitica*). At least 12 amphibian species have been found including the endemic and vulnerable Koh Chang frog (*Rana kohchangae*). There are at least 30 species of reptiles, of which 19 are snakes.

7.3 PRESENT USE:

The mangrove forest in this Province has for many years been used as a source of charcoal and tannin, extracted under a government concession which was terminated in 2001. During the 1970's and 80's around 80% of mangrove cover along the Thai coast bordering the Gulf of Thailand and South China Sea was removed, but this situation has been reversed over the last decade such that the area of mangrove is stable over most of the area and increasing through reforestation in some coastal Provinces. At present local villagers earn their living through coastal fishing, while the collection and sale of mud crabs and grapsid crabs also makes an important contribution to the income of local people. At the nearby Koh Chang National Park, collection of edible swallows nests is an extremely lucrative activity, providing an income of approximately \$US 1,250 – 2,000 per kg – in comparison with an annual average income of \$US 1,700 per capita for Trat province's

population of 94,506 people. It has been observed that the swallows often feed on flies and mosquitoes in the mangrove area. Fire-flies are found in the mangrove forest and could serve as an ecotourist attraction in the future.

Seven villages are located in the Tatapao/Namcheio conservation forest area while around 21 coastal villages in the province depend upon mangrove resources for part of their livelihood and income.

7.4 MANGEMENT REGIME:

In a survey conducted in 2000, the total area designated as mangrove forest in Trat province covered 9,254 ha. This area was classified into three zones: a conservation zone (5,230 ha), a zone with permitted land uses, and a 1,136 ha replanting zone. These areas are public land nominally owned by the government, but are prone to encroachment, by local people. The Department of Marine and Coastal Resources (Ministry of Natural Resources and Environment), which is responsible for managing mangrove resources in Thailand, established a regional office to manage this area in 2002, while a Mangrove Research and Development Station had been established previously in 1991. The management regimes designed by these offices include mangrove protection and enforcement measures, conservation and restoration initiatives, and research and development work. The Department is responsible for enforcement of conservation areas and has also established a database on the mangrove forest area under its responsibility.

The Department co-operates with other government departments having responsibility for natural resource management including the Royal Forest Department and the National Parks Department. A central feature of the management regime in this Province has been the formation of volunteer conservation groups and the establishment of public awareness schemes as part of a public participation programme supported by RECOFTC's Thailand Outreach Programme. The Mangrove Conservation and Development Group is a very successful non-governmental conservation group based at Prednai Village, where a mangrove forest area of 1,920 ha has been designated by the villagers as a conservation area and villagers have agreed not to catch fish and crabs at ecologically sensitive times. The community carries out its own enforcement to ensure that the conservation area is respected, including imposing fines and handing over serious offenders to the police, the community also organizes replanting and other conservation activities.

The Thai Environmental Consulting Association is another local conservation group active in conserving the Tatapao and Nam Chiaw mangrove forests. The group organizes restoration activities, has run a public awareness programme for schools and local inhabitants, and maintains a watch over the forests. Their work is an example of successful cooperation between local people, NGOs, and government departments in mangrove restoration and conservation. Approaches such as this are seen as the way forward for mangrove management in the area and should be further refined and built upon to develop management regimes for the future.

8. STAKEHOLDERS:

Annex 2 identifies stakeholders in the project and suggests approaches to ensure that they are able to participate in the project. Key stakeholders include:

1. The Department of Marine and Coastal Resources, which is responsible for mangrove conservation in Thailand and which will be lead the project as the Specialised Executing Agency for the UNEP/GEF South China Sea Project designated by the government as the mangrove focal point for Thailand.
2. Other central government departments with responsibility for natural resource management, such as the Royal Forest Department and the National Parks Department, will be involved principally in a consultative manner, but may also be targets for training and policy level initiatives.
3. Local government bodies in Trat province. The Provincial Governor's office is a key stakeholder, as the support of the Governor will be essential if the project is to have a high profile and if policy level initiatives are to succeed. Also important are Tambon Administration Organisations (Or Bor Tors), who are responsible for local government administration at the lowest, sub-district, level.
4. Mangrove conservation groups and community development groups operating in Trat province, are of critical importance and will implement many of the project activities.
5. Villagers living in coastal communities in Trat province, will be the target group for many project activities. Within this group school children and young people will be a particular focus for awareness raising activities and those who rely on mangroves for their livelihoods will be a focus for income generating activities.

6. Other conservation organisations operating in Thailand with an interest in mangroves, including Wetlands International, REFCOFTC, Kung Kraben Royal Project and Yadfon Association, will be involved in a consultative and collaborative advisory capacity.
7. Research organizations including RECOFTC and universities.

9. THREATS:

Threats identified in the area, in approximate order of importance, are as follows:

- Illegal encroachment into mangrove forest areas for human settlement purposes, resulting in loss of forest.
- Unsupervised and ecologically destructive clearing of mangroves to construct shrimp and fish ponds, often illegally.
- Over fishing by commercial fishing boats that typically employ destructive fishing methods such as push-nets and fine mesh nets. This has an impact both on the livelihoods of local villagers and on the fauna of the mangrove ecosystems.
- Cutting of wood by outsiders to the community for use as building material and, in a few cases, charcoal production.
- Coastal erosion exacerbated by construction work by the Harbour Department elsewhere along the coastline.
- Waste dumping in mangrove forest areas, a problem in the past has now been successfully addressed and the problem mitigated.
- The area has had a history of destructive tree felling by concessionaires who cleared forest areas without replanting them. This resulted in considerable conflict between concessionaires and local conservationists. Tree felling by concessionaires no longer seems to be an issue following withdrawal of mangrove cutting concessions by the government in 2001.

Annex 3 provides a causal chain analysis for these threats.

10. GOALS AND PURPOSE:

The purpose of the project is to establish a demonstration site for good practice in community participation in mangrove conservation work in Trat Province that can serve as a model for wider application nationally, and in the other countries participating in the UNEP/GEF South China Sea Project. The project will address the threats identified above and seek to reverse environmental degradation in the area by developing a management plan involving all stakeholders that addresses the current causes of unsustainable patterns of use.

11. RATIONALE AND OBJECTIVES:

The critical environmental problem, which needs to be addressed at this site is long term ecological change resulting from the prior destruction of mangroves over a period of more than 40 years. One of the reasons for this destruction is a lack of understanding of the economic benefits provided by mangroves, and the project will aim to both increase understanding of the value of mangroves and strengthen the links between the conservation of mangrove forests and the livelihoods of local people. The demonstration site will help show policy makers and local communities the successes that can be achieved in mangrove conservation through a strong community participation programme. Project activities will complement national conservation strategies and also contribute towards a better understanding of mangrove management by local volunteer groups. The immediate objectives are:

1. Develop and implement a mangrove replanting programme in Trat Province centred on the demonstration site and Tatapao/Namchieo including re-planting around 300 hectares of mangrove annually, using a mix of species to increase the biodiversity of the forest estate.
2. Strengthen and expand as appropriate, the community-based management system for the Trat Province Mangroves through;
 - Establishment of Management Framework and networks of community based stakeholder groups;
 - Preparation of a comprehensive management plan for the habitats and resources of the site including maps of forest areas and designated land uses including conservation areas;
 - Appropriate Forest Management actions including provision of data and information regarding zonation and socio-economic importance for decision making;
 - Establishing and implementing an active programme of mangrove reforestation.
3. Develop a business plan for sustainable financing of the management of the Trat Province mangroves including:

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| <ul style="list-style-type: none"> • Diversification of income sources and improving financial security of local people with low incomes, including identification of new revenue streams and new opportunities; • specific actions to investigate the feasibility of ecotourism locally, to generate income and promote the role of the demonstration centre; • increased capacity of local conservation groups and NGOs to devise and manage projects, network internationally, and pass on the experience they have accumulated to other conservation groups regionally. <p>4. Enhanced awareness and understanding of mangroves at all levels of government and civil society.</p> |
| <p>12. OUTCOMES:</p> <p>Desired outcomes from the project interventions are as follows (numbering corresponds to goals and objectives above)</p> <ol style="list-style-type: none"> 1. Increased mangrove coverage at suitable locations to a total of 900 hectares over three years. Including increased species diversity and numbers at the site based on applied research into site ecology, trophic dynamics, nursery functions, and habitat features. 2. Reduced illegal mangrove cutting through provision of alternative sustainable livelihoods for local communities. 3. Establishment of sustainable use regimes to protect mangrove and fishery resources from depletion resulting from human use. 4. Increased understanding of the environmental and economic value of mangroves and establish a perception that mangrove conservation areas are a beneficial land use. |
| <p>13. PLANNED ACTIVITIES TO ACHIEVE OUTCOMES:</p> <p>The activities are grouped into three major components as follows: Establishment of an appropriate, community-based management system for the Trat Province Mangroves (Management); Develop a Business Plan for Trat Province mangroves sustainable financing (Business Plan); and, Training, Education and Awareness. The framework work plan and timetable are presented in Table 1.</p> <p>Component 1 – Management</p> <p>The primary activities under this component focus on the establishment of a Management Framework and networks of community based stakeholder groups including the Management Board, and Senior Advisory Group; establishment of the project office; appointment of personnel and convening of regular management and stakeholder meetings and consultations. Initial activities will result in the establishment of an agreed comprehensive management plan for the habitats and resources of the site including maps of forest areas and designated land uses including conservation areas, based on the compilation of all existing environmental and socio-economic data into a single comprehensive GIS database. Initial actions will result in identification of information gaps and will be followed by an evaluation of current stakeholders' patterns of use; determination of economic values of habitats and resources; baseline surveys of the current condition of mangrove resources, and threats and preparation of an overall report on: environmental state of mangroves; stakeholder present use, and economic value.</p> <p>Through a process of consultation at the community (Village Chairperson/head) level the initial analysis of present use will be used as the basis for preparation of a draft management plan based on existing plans, GIS data and will include zoning plans for conservation and marine protection, sustainable use, buffer zones, restoration activities, rules and regulations and actions in response to breach of such rules. The management plan will be reviewed, finalised and approved through a fully integrated process of consultation at all levels, resulting in plans for immediate actions to implement the management plan within the time frame of the project. Immediate actions will include distribution of use zone maps, signage, and implementation of an agreed community patrol system, and re-planting programme.</p> <p>Component 2 – Business Plan</p> <p>An important aspect of long-term sustainable management is, the need to diversify income sources and improve the financial security of local people with low incomes. Through community consultation, agreement will be reached regarding an appropriate and realistic sustainable use strategy for mangrove products and options for development of community businesses based on an analysis of potential future uses, value, net income and costs. This will involve: market research to identify potential pilot activities and sites and, where feasible, promote the establishment of such businesses; investigation of the need for funding to stimulate and support community businesses and options for providing funding, including the identification of existing sources and the scope for establishment of a micro-credit scheme.</p> |

Recognising that management of mangroves at the level of the Trat Province will require on-going support from Central and Provincial governments for the foreseeable future, an attempt will be made to evaluate provincial net income and existing revenues and costs associated with mangrove ecosystems in order to design for the longer term a sustainable financing strategy including financial management mechanisms at provincial and community levels.

Component 3 – Training, Education And Awareness

The third component is divided into three sub-components addressing: the need for enhanced public awareness regarding the benefits and values of mangrove ecosystems and the services they provide; training needs at the both the community and government levels; and education specifically at the level of school children in Trat Province.

The purpose of the Public Awareness sub-component is to enhance awareness and understanding of mangroves at all levels of government, civil society, and communities and will centre on expansion of the capacity and role of the existing learning centre in Pred Nai Village, including preparation of exhibition materials, information resources including simple database, displays, and publicising the centre through local radio, television and print media, and through a programme of visits by schools and other civil society groups. In addition Project staff will be responsible for publicising the outcome of the project both nationally and internationally and a programme of open days, and visits for different target groups of civil society will be arranged.

Training needs will be assessed at community and government levels: it is envisaged that training needs may include but not be limited to: financial management and basic business skills based around sustainable use of mangroves; principles and practice of community forest management; technical monitoring for selected local people (e.g. salinity monitoring, identification of acid sulphate soils areas, tree growth monitoring and presentation/interpretation of scientific data); training in enforcement for community volunteers and training for harbours staff on coastal transport modelling, erosion prevention, and sustainable alternatives to 'hard' coast defences.

The focus of the Education activities is on the preparation and distribution of posters, brochures and booklets on topics of relevance to mangroves and coastal management as identified in the training needs assessment and to develop appropriate targeted educational material about the ecology and value of mangroves to inform and educate local school children (30+ primary schools, 10 secondary schools) about the value of mangroves and the benefits of a sustainable approach to development. Other activities will include the organisation and implementation of a programme of suitable educational activities for schoolchildren, community groups, and local leaders, including youth camps, and theme days.

14. SUSTAINABILITY ANALYSIS AND RISK ASSESSMENT:

The mangroves in the project area have been officially designated as mangrove conservation forest by the Thai government, and their conservation and management therefore falls under the responsibility of the Department of Marine and Coastal Resources. The Department will be able to continue to assist local communities in co-ordinating and administering mangrove forest management after the project ends, although it is unrealistic to expect the Department to fund activities over and above current (pre-project) levels, hence the need for a business plan. If the project succeeds in meeting its objectives a community network will have been established to bring together community representatives, NGOs, and government to manage local mangrove forests in the long term.

The project is likely to result in a number of 'spin-offs' projects (for example, promotion of ecotourism in the area) that will continue to promote development and conservation work in the area. Stakeholders such as Wetlands International are committed to supporting such initiatives and will provide assistance in seeking funding and establishing related and associated activities. It is anticipated that research establishments will maintain an interest in conducting investigations in the area after the project has been completed, and that such research is likely to be carried out in collaboration with local conservation groups.

Ongoing financing for the Learning Centre is likely to be required if the Centre is to play a role as a hub for promoting the Trat mangrove forests as a demonstration site. This may present a difficulty, although the Centre has been successful in generating project related financial support in the past. There is the possibility of establishing a community fund to help support future conservation activities in the area if community businesses are successfully established as a result of the project.

The most likely risks anticipated for the project are as follows.

1. Community based natural resource management receives less political support in the future in Thailand. This should not present a challenge if a robust structure for community management of the mangrove forests is established.

2. Stakeholders are unable to agree on a framework for community management of mangrove resources. Should this be the case, the Department of Marine and Coastal Resources will continue to manage the resource, as at present, but with the benefit of the increased consultation and participation which the project has generated.
3. The project experiences difficulty in promoting its work to a wide audience. The involvement of Wetlands International and collaboration with organisations such as Yadfon Association, which are part of existing mangrove conservation networks, should help in promoting work carried out during the project elsewhere in Thailand, whilst the joint activities with Cambodia provide a broader base for co-operation and exchange of experiences.
4. Lack of enforcement undermines conservation efforts. Experience has shown that this is a significant risk in Thailand. Local communities have shown that they are willing to patrol conservation areas and confront offenders, but support from NGOs and the involvement of government departments will also be required. Support from high profile local figures such as the Provincial Governor may assist in deterring unlawful activities in conservation areas and thus reduce this risk.
5. No market can be found, for products or services, which can be produced by community businesses. Income generation work will be based around extending existing livelihood activities, and emphasis on eco-tourism is likely to be supported through other initiatives of the Tourist Authority of Thailand in Trat Province. Specialist advice will be needed in this area.
6. Individuals on low incomes within the local communities do not benefit from income generating activities. This is a common failure in development projects and the project team will need to make special efforts to encourage and facilitate the involvement of the most needy in such activities. Input from local NGOs and their knowledge of local communities and their economies will be required in planning and implementing this part of the project.
7. Enforcement and conservation initiatives result in conflict with influential people involved in illegal activities. There has been a history of such conflict in the area over mangrove timber concessions, but solidarity among local communities has succeeded in eliminating the threat. By asserting their claim to conservation areas in a high profile way and enlisting the support of powerful government officials, it is likely that illegal activities can be deterred and conflict avoided.
8. The Harbour Department sometimes takes a traditional technocratic view of its work and may be unreceptive to initiatives to change policies on coastal works. Again, the support of the Provincial Governor will be an asset here. Ensuring that NGOs and villagers are aware of policy will help them oppose any infringements.

15. ESTIMATED BUDGET

The budget tables are presented in Annex 4.

16. IMPLEMENTATION PLAN

Table 1 Framework Work plan and schedule for the Thai components of the joint Thai Cambodian Mangrove Demonstration Site.

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|---------------|--|---|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------------------------------------|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| 1. MANAGEMENT | 1.1 Establishment of Management Framework and networks of community based stakeholder groups | 1.1.1 Appoint project personnel [site manager, administrative and, finance officer, driver] | | | | | | | | | | | | | |
| | | 1.1.2 Establish project office in the Mangrove Resources Research Station Area 4 and establish cross-border communication arrangements | | | | | | | | | | | | | |
| | | 1.1.3 Formally Establish Trat Management Board and Senior Advisory Group under authority of the DG DMCR. | | | | | | | | | | | | | |
| | | 1.1.4 Establish the elements of the community based management framework encompassing 7 villages (Tatapao / Namchieo conservation forest). Define the modes of communication, and frequency of consultations (at least monthly). | | | | | | | | | | | | | |
| | | 1.1.5 Convene quarterly meetings of the Management Board and half yearly meetings of the Senior Advisory Group | | M,S | M | M,S | M | M,S | M | M,S | M | M,S | M | M,S | |
| | | 1.1.6 Convene quarterly community meetings of the 21 village representatives in Trat Province. | | X | X | X | X | X | X | X | X | X | X | X | |
| | | 1.1.7 Prepare half yearly progress and expenditure reports for UNEP, Management Board and NTWG. | | | X | | X | | X | | X | | X | | |
| | | 1.1.8 Independent evaluation of project progress at mid-point and end of GEF grant support by a regional expert. | | | | | | X | | | | | X | | |
| | | 1.1.9 Prepare and submission of final project summary report to UNEP/GEF | | | | | | | | | | | | X | |
| | 1.2 Prepare a comprehensive management plan for the habitats and resources of the site including maps of forest areas and designated land uses including conservation areas. | | | | | | | | | | | | | | |
| | | 1.2.1 Assemble all existing environmental and socio-economic data into a single comprehensive GIS database; identify information gaps and design necessary baseline surveys. | | | | | | | | | | | | | |
| | | 1.2.2 Conduct an evaluation of current stakeholders' patterns of use through site level social surveys; economic values of habitats and resources net sales value and costs of production | | | | | | | | | | | | | |
| | | 1.2.3 Undertake rapid baseline surveys as required to assess current condition of mangrove resources, and threats Preparation of an overall report on: environmental state of mangroves; stakeholder present use, and economic value. | | | | | | | | | | | | | |

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|-----------|---|---|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------------------------------------|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| | | 1.2.4 Organise appropriate consultations at the community (Village Chairperson/head) for clearance of the outputs from 1.2.2 and 1.2.3 above. Provincial government consultations to discuss and clear the report on stakeholder use and economic value. | | | | | | | | | | | | | |
| | | 1.2.5 Preparation of initial draft management plan based on existing plans, GIS data and initial stakeholder consultations including zoning plans for conservation and marine protection, sustainable use, buffer zones, restoration activities, rules and regulations and actions in response to breach of such rules. | | | | | | | | | | | | | |
| | | 1.2.6 Review of initial draft by community representatives (7 villages) and meeting/workshop to critically review the draft. | | | | | | | | | | | | | |
| | | 1.2.7 Revision of the draft including preparation of final maps and charts of use areas and zones | | | | | | | | | | | | | |
| | | 1.2.8 Finalisation and submission of the management plan to management board for recommendation to Provincial Governor and Office of Environmental Policy and Planning for final approval | | | | | | | | X | | | | | |
| | | 1.2.9 Immediate Actions to implement the management plan including publication and distribution of use zone maps installation of signpost areas, marker buoys. | | | | | | | | | | | | | |
| | | 1.2.10 Establish a patrol system and undertake community-based patrols. | | | | | | | | | | | | | |
| | | 1.2.11 Undertake forest area maintenance activities and initiate new activities as programmed in management plan through the work of community members, DMCR staff, or contractors as appropriate. | | | | | | | | | | | | | |
| | 1.3 Investigate and identify appropriate reforestation techniques and design and implement replanting and maintenance programme. | | | | | | | | | | | | | | |
| | | 1.3.1 A.1.2 Document the processes, success and failures of activities and processes involved in developing co-management of mangrove forests, in the Trat mangrove area. | | | | | | | | | | | | | |
| | | 1.3.2 Evaluate previous experience of mangrove restoration in Thailand and identify appropriate techniques for trailing in Trat Province | | | | | | | | | | | | | |
| | | 1.3.3 Design in full consultation with local communities a long-term programme of replanting and mangrove restoration in the area | | | | | | | | | | | | | |
| | | 1.3.4 Undertake pilot activities regarding natural mangrove recolonisation following restoration of hydrological conditions. | | | | | | | | | | | | | |

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|-------------------------|---|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|---|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| | | 1.3.5 Undertake regular community mangrove planting activities and twice-annual high profile planting events to mark special occasions. | | X | | X | | X | | X | | X | | X | World Wetland Day and HM King's birthday? |
| | | 1.3.6 Monitor successes and failures in rehabilitation efforts and prepare guidelines for future use at the community level. | | | | | | | | | | | | | Shaded area = report. Monitoring is ongoing. |
| 2. BUSINESS PLAN | | | | | | | | | | | | | | | |
| | 2.1 Diversification of income sources and improving financial security of local people with low incomes, including identification of new revenue streams and new opportunities | | | | | | | | | | | | | | |
| | | 2.1.1 Through community consultation, agree an appropriate and realistic sustainable use strategy for mangrove products and options for development of community businesses based on an analysis of potential future uses, value, net income and costs | | | | | | | | | | | | | |
| | | 2.1.2 Evaluate the feasibility of community businesses based around sustainable uses both current and potential new uses of mangrove resources | | | | | | | | | | | | | |
| | | 2.1.3 Undertake market research. Identify potential pilot activities and sites and, where feasible, promote the establishment of such businesses. | | | | | | | | | | | | | |
| | | 2.1.4 Investigate need for funding to stimulate and support community businesses and options for providing funding, including the identification of existing sources of funding and the scope for establishment of a micro-credit scheme | | | | | | | | | | | | | |
| | | 2.1.5 Establishment of micro-financing funds and operation following agreement of disbursement procedures and financial controls. | | | | | | | | | | | | | |
| | 2.2 Financial sustainability of Trat Province Mangrove Management framework and plan | | | | | | | | | | | | | | |
| | | 2.2.1 Evaluate Provincial level net income and Existing revenue, (through resource and other taxes, licence fees etc.) | | | | | | | | | | | | | |
| | | 2.2.2 Evaluate existing management costs (government agencies costs) | | | | | | | | | | | | | |
| | | 2.2.3 Develop an appropriate financial plan based on actual and potential revenue and agreed revenue collection procedures | | | | | | | | | | | | | |
| | | 2.2.4 Approval and establishment of financial management mechanisms at provincial and community levels | | | | | | | | | | | | | Is 9 months long enough? National level approval required |

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|---|---------------|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|---|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| | 2.3 | Investigate the feasibility of ecotourism locally to generate income and promote the role of the demonstration centre. | | | | | | | | | | | | | |
| | | 2.3.1 Discuss and evaluate ecotourism opportunities with local communities and raise awareness of the meaning and limitations of ecotourism. | | | | | | | | | | | | | Earlier than Cambodia - programme slack should allow this |
| | | 2.3.2 Identify features of interest (such as fire flies, bird species) and suitable locations. | | | | | | | | | | | | | |
| | | 2.3.3 Establish a simple model activity (e.g. boat tours, boardwalk) to act as an entry point into ecotourism. | | | | | | | | | | | | | |
| | | 2.3.4 Provide training required (e.g. tour guide training) and establish support structures to promote and maintain the model activity. | | | | | | | | | | | | | |
| 3. TRAINING, EDUCATION AND AWARENESS | | | | | | | | | | | | | | | |
| | 3.1 | Public Awareness: Enhance awareness and understanding of mangroves at all levels of government, civil society, and communities | | | | | | | | | | | | | |
| | | 3.1.1 Develop the existing Learning Centre in Pred Nai Village to help promote demonstration site role and disseminate information materials. | | | | | | | | | | | | | |
| | | 3.1.2 Prepare exhibition materials for the centre, develop information resources including simple database, displays etc. | | | | | | | | | | | | | |
| | | 3.1.3 Publicise the role of the Learning Centre through local radio, television and print media arrange a programme of visits by schools and other civil society groups. | | | | | | | | | | | | | Ongoing activity |
| | | 3.1.4 Liase with local media to organise TV and radio broadcasts and news articles about mangrove conservation, demonstration site activities and the project. | | | | | | | | | | | | | Ongoing activity, as opportunities arise |
| | | 3.1.5 Prepare quarterly project newsletters for stakeholders. | X | X | X | X | X | X | X | X | X | X | X | X | |
| | | 3.1.6 Appropriate project representatives attend at least one suitable international conference on mangrove conservation/wetlands annually, to present a paper on the project's work. And present the results of the project at suitable national mangrove meetings/conferences. | | | | | | | | | | | | | |
| | | 3.1.7 Submit at least one paper per year on the major outcomes of the project activities to international research journals. | | | | | | | | | | | | | |
| | | 3.1.8 Arrange "open days" for the press to visit and view the project's mangrove conservation work when suitable opportunities arise. | | | | | | | | | | | | | Ongoing activity, as opportunities arise |
| | | 3.1.9 Organise annual visits to the site for around 50 community representatives involved in sustainable use of mangroves from outside Trat Province. | | | | | | | | | | | | | Yearly rather than annual |

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|-----------|----------------------|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|---|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| | 3.2 Training | | | | | | | | | | | | | | |
| | | 3.2.1 Undertake training needs assessment and prepare training programme targeting local and provincial government officers, and local communities. Identify in close consultation with the entities concerned needs for specific training in areas such as coastal zone management | | | | | | | | | | | | | |
| | | 3.2.2 Implement the training programme at the community level; it is envisaged that training needs may include but not be limited to: financial management and basic business skills based around sustainable use of mangroves, principles and practice of community forest management; technical monitoring for selected local people (e.g. salinity monitoring, identification of acid sulphate soils areas, tree growth monitoring and presentation/interpretation of scientific data). | | | | | | | | | | | | | Needs to correspond with Cambodia activity 3.1.4? |
| | | 3.2.3 Undertake training in enforcement for community volunteers. | | | | | | | | | | | | | |
| | | 3.2.4 Implement the targeted training programme for government agencies and personnel. It is envisaged that training needs may include but not be limited to training for harbours staff on coastal transport modelling, erosion prevention, and sustainable alternatives to 'hard' coast defences. | | | | | | | | | | | | | |
| | | 3.2.5 Identify opportunities for group study tours (including DMCR mangrove management staff and selected NGO and community group members from Trat Province) to selected mangrove management sites in the South China Sea region. | | | | | | | | | | | | | |
| | | 3.2.6 Arrange appropriate workshops to learn from and network with communities engaged in similar activities. | | | | | | | | | | | | | Needs to correspond with Cambodia activity 3.1.4? |
| | 3.3 Education | | | | | | | | | | | | | | |
| | | 3.3.1 Prepare and distribute posters, brochures and booklets on topics of relevance to mangroves and coastal management as identified in the training needs assessment. | | | | | | | | | | | | | Prepare Q1 and distribute over remainder of the year. Or maybe prepare technical publications throughout the project? |

| Component | Sub-component | Activities | 2005 | | | | 2006 | | | | 2007 | | | | Notes on possible joint activities |
|---------------------------------------|---------------|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|--|
| | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | |
| | | 3.3.2 Develop appropriate targeted educational material about the ecology and value of mangroves to inform and educate local school children (30+ primary schools, 10 secondary schools) about the value of mangroves and the benefits of a sustainable approach to development. | | | | | | | | | | | | | Prepare Q1 and distribute over remainder of the year |
| | | 3.3.3 Print and distribute educational material through appropriate channels. | | | | | | | | | | | | | |
| | | 3.3.4 Organise and implement a programme of suitable educational activities for schoolchildren, community groups, and local leaders, including youth camps, and theme days. | | | | | | | | | | | | | Needs to correspond with Cambodia activity 3.1.4? Dry season. Link adult/ child events to involve all? |
| JOINT ACTIVITIES WITH CAMBODIA | | | | | | | | | | | | | | | |
| | | Set up joint management board | | | | | | | | | | | | | |
| | | Set up technical working group | | | | | | | | | | | | | |
| | | Joint management board meetings (alternate in each country) | | | X | | X | | | X | | X | | | |
| | | Programme of joint technical workshops | XX | | XX | | XX | XX | XX | XX | XX | XX | XX | | |
| | | Attendance at training / community events in Cambodia | | | | C | V | C | | C | V, C | | C | | V: VIP (launch and adoption of mgmt plan) C: Community training events (3.1.3) as far as possible |

17. PROPOSED MANAGEMENT OF THE ACTIVITIES:

The execution of project activities will be conducted at the Provincial level, by project and DMCR staff, with the DMCR headquarters in Bangkok, providing oversight and monitoring on a regular monthly basis. Semi-annual reporting of activities and financial aspects will be monitored by the UNEP/GEF Project Co-ordinating Unit on behalf of the Implementing Agency (see Annex 5)

The project activities in Trat Province will be directed by, a Project Management Board (see Annex 6), with representatives from the Department of Marine and Coastal Resources. A site manager, and field officer will be responsible for day-to-day management of the project and co-ordinating project activities, and will work from the local office of the Department of Marine and Coastal Resources. Working groups consisting of suitable local representatives will advise and direct on work towards specific activity clusters. The site manager will be supported by dedicated financial and administration staff for the project and staff from the Provincial level offices of the DMCR.

The wider network of organizations involved in project execution will be linked through workshops, seminars, field-work, training courses as well as community based meetings, to which all stakeholders will be invited and which will serve to provide advice and inputs to management. The management framework is outlined in Figure 1 of Annex 6

18. INFORMATION ON PROPOSED EXECUTING AGENCY:

The Department of Marine and Coastal Resources will be the agency responsible for execution of the project activities in Thailand and will be represented on the Project Management Board. The Department was established in 2002 as part of Thailand's newly formed Ministry of Natural Resources and the Environment, bringing together administrators and experts on coastal resources from a number of predecessor agencies. The Department has legal responsibility for managing activities in the coastal area and an increasing proportion of its work is carried out from Regional and Provincial offices.

19. EXECUTING AGENCY CONTACT PERSONS:

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Annex 1:

TRAT PROVINCE MANGROVE BIODIVERSITY

Table 1 True Mangrove Species

| Family | Species |
|----------------|-----------------------------------|
| Acanthaceae | <i>Acanthus ebracteatus</i> |
| Acanthaceae | <i>Acanthus ilicifolius</i> |
| Chenopodiaceae | <i>Suaeda maritima</i> |
| Combretaceae | <i>Lumnitzera littorea</i> |
| Combretaceae | <i>Lumnitzera racemosa</i> |
| Ebenaceae | <i>Excoecaria agallocha</i> |
| Lythraceae | <i>Pemphis acidula</i> |
| Meliaceae | <i>Xylocarpus granatum</i> |
| Meliaceae | <i>Xylocarpus moluccensis</i> |
| Myrsinaceae | <i>Aegiceras corniculatum</i> |
| Palmae | <i>Nypa fruticans</i> |
| Palmae | <i>Phoenix paludosa</i> |
| Pteridaceae | <i>Acrostichum aureum</i> |
| Pteridaceae | <i>Acrostichum speciosum</i> |
| Rhizophoraceae | <i>Bruguiera cylindrica</i> |
| Rhizophoraceae | <i>Bruguiera gymnorhiza</i> |
| Rhizophoraceae | <i>Bruguiera hainesii</i> |
| Rhizophoraceae | <i>Bruguiera parviflora</i> |
| Rhizophoraceae | <i>Bruguiera sexangula</i> |
| Rhizophoraceae | <i>Ceriops decandra</i> |
| Rhizophoraceae | <i>Ceriops tagal</i> |
| Rhizophoraceae | <i>Kandelia candel</i> |
| Rhizophoraceae | <i>Rhizophora apiculata</i> |
| Rhizophoraceae | <i>Rhizophora mucronata</i> |
| Rubiaceae | <i>Scyphiphora hydrophyllacea</i> |
| Sonneratiaceae | <i>Sonneratia alba</i> |
| Sonneratiaceae | <i>Sonneratia caseolaris</i> |
| Sonneratiaceae | <i>Sonneratia ovata</i> |
| Sterculiaceae | <i>Heritiera littoralis</i> |
| Tiliaceae | <i>Brownlowia tersa</i> |
| Verbenaceae | <i>Avicennia alba</i> |
| Verbenaceae | <i>Avicennia marina</i> |
| Verbenaceae | <i>Avicennia officinalis</i> |
| Total | 33 |

Table 2 Associate Mangrove Species

| Family | Scientific Name |
|------------------|-----------------------------------|
| Aizoaceae | <i>Sesuvium portulacastrum</i> |
| Apocynaceae | <i>Cerbera manghas</i> |
| Apocynaceae | <i>Cerbera odollam</i> |
| Asclepiadaceae | <i>Finlaysonia maritima</i> |
| Barringtoniaceae | <i>Barringtonia racemosa</i> |
| Bignoniaceae | <i>Dolichandrone spathacea</i> |
| Casuarinaceae | <i>Casuarina equisetifolia</i> |
| Compositae | <i>Pluchea indica</i> |
| Convolvulaceae | <i>Ipomoea pes-caprae</i> |
| | <i>Chaetocarpus castanocarpus</i> |
| Eupobiaceae | <i>Sapium indicum</i> |
| Eupobiaceae | <i>Terminalia catappa</i> |
| Flacourtiaceae | <i>Scolopia macrophylla</i> |
| Flagellariaceae | <i>Flagellaria indica</i> |
| Goodeniaceae | <i>Scaevola taccada</i> |
| Guttiferae | <i>Calophyllum inophyllum</i> |
| Leguminosae | <i>Cynometra iripa</i> |
| Leguminosae | <i>Derris indica</i> |
| Leguminosae | <i>Derris trifoliata</i> |
| Leguminosae | <i>Intsia bijuga</i> |
| Malvaceae | <i>Hibiscus tiliaceus</i> |
| Malvaceae | <i>Thespesia populnea</i> |
| Melastomaceae | <i>Melastoma villosum</i> |
| Meliaceae | <i>Amoora cucullata</i> |
| Meliaceae | <i>Thespesia populneoides</i> |
| Meliaceae | <i>Xylocarpus rumphii</i> |
| Myrsinaceae | <i>Rapanea portoriana</i> |
| Pandanaceae | <i>Pandanus odoratissimus</i> |
| Rubiaceae | <i>Guettarda speciosa</i> |
| Sapindaceae | <i>Allophyllus cobbe</i> |
| Sapotaceae | <i>Planchonella obovata</i> |
| Verbenaceae | <i>Clerodendrum inerme</i> |
| Verbenaceae | <i>Eugenia grandis</i> |
| Verbenaceae | <i>Eugenia linnaea</i> |
| Verbenaceae | <i>Eugenia spicata</i> |
| Verbenaceae | <i>Premna obtusifolia</i> |
| Total | 36 |

Table 3 Bird Species recorded from mangrove forest and coastal areas of Trat Province.

| Species |
|----------------------------------|
| <i>Accipiter badius</i> |
| <i>Accipiter gularis</i> |
| <i>Accipiter soloensis</i> |
| <i>Accipiter virgatus</i> |
| <i>Acridotheres javanicus</i> |
| <i>Acridotheres tristis</i> |
| <i>Acrocephalus arundinaceus</i> |
| <i>Actitis hypoleucos</i> |
| <i>Aegithina tiphia</i> |
| <i>Aerodramus fuciphagus</i> |
| <i>Aethopyga siparaja</i> |
| <i>Alauda gulula</i> |
| <i>Alcedo atthis</i> |
| <i>Amaurornis phoenicurus</i> |
| <i>Anous stolidus</i> |
| <i>Anthracoeros albirostris</i> |
| <i>Anthreus singalensis</i> |
| <i>Anthus noveboracensis</i> |
| <i>Apus affinis</i> |
| <i>Arachnothera longirostra</i> |
| <i>Ardeola bacchus</i> |
| <i>Artamus fuscus</i> |
| <i>Athreptes malacensis</i> |
| <i>Aviceda leucophotes</i> |
| <i>Butorides striatus</i> |
| <i>Cacomantis merulinus</i> |
| <i>Calidris temminckii</i> |
| <i>Caprimulgus macrurus</i> |
| <i>Centropus sinensis</i> |
| <i>Ceyx erithacus</i> |
| <i>Chalcophaps indica</i> |
| <i>Charadrius alexandrinus</i> |
| <i>Charadrius dubius</i> |
| <i>Charadrius leschenaultii</i> |
| <i>Charadrius mongolus</i> |
| <i>Chlidonias leucophaea</i> |
| <i>Copsychus malabaricus</i> |
| <i>Copsychus saularis</i> |
| <i>Coracias benghalensis</i> |
| <i>Corvus macrorhynchos</i> |
| <i>Crinifer ochraceus</i> |
| <i>Cryptosyrinx temia</i> |
| <i>Cuculus vagans</i> |
| <i>Cyanoptila cyanomelana</i> |
| <i>Cyornis rubeculoides</i> |
| <i>Cyornis ruficastris</i> |
| <i>Cypsiurus balasensis</i> |
| <i>Dendronanthus indicus</i> |
| <i>Dicaeum concolor</i> |
| <i>Dicaeum cruentatum</i> |
| <i>Dicrurus leucophaeus</i> |
| <i>Dicrurus macrocerus</i> |
| <i>Dicrurus paradiseus</i> |
| <i>Ducula aenea</i> |
| <i>Ducula bicolor</i> |
| <i>Egretta alba</i> |
| <i>Egretta garzetta</i> |
| <i>Egretta intermedia</i> |
| <i>Egretta sacra</i> |
| <i>Elanus caeruleus</i> |
| <i>Eudynamis scolopacea</i> |
| <i>Ficedula zanthopygia</i> |
| <i>Gallus gallus</i> |
| <i>Garrulax merulinus</i> |
| <i>Gracula religiosa</i> |
| <i>Halcyon chloris</i> |
| <i>Halcyon pileata</i> |
| <i>Halcyon smyrnensis</i> |
| <i>Haliaeetus leucogaster</i> |
| <i>Haliastur indus</i> |
| <i>Harpactes erythrocephalus</i> |
| <i>Harpactes oreskios</i> |
| <i>Helipais personata</i> |
| <i>Himantopus himantopus</i> |

Table 3 continued Bird Species recorded from mangrove forest and coastal areas of Trat Province.

| Species |
|-----------------------------------|
| <i>Hirundo rustica</i> |
| <i>Hirundo tahitica</i> |
| <i>Hypothymis azurea</i> |
| <i>Hypsipetes thompsoni</i> |
| <i>Irena puella</i> |
| <i>Limosa limosa</i> |
| <i>Macronous gularis</i> |
| <i>Megalaima lineata</i> |
| <i>Meiglyptes jugularis</i> |
| <i>Monticola gularis</i> |
| <i>Muscicapa dauurica</i> |
| <i>Myiophonus caeruleus</i> |
| <i>Nectarinia jugularis</i> |
| <i>Oriolus chinensis</i> |
| <i>Orthotomus atrogularis</i> |
| <i>Orthotomus sutorius</i> |
| <i>Pandion haliaetus</i> |
| <i>Passer flaveolus</i> |
| <i>Passer montanus</i> |
| <i>Pellorneum ruficeps</i> |
| <i>Pericrocotus divaricatus</i> |
| <i>Phaenicophaeus tristis</i> |
| <i>Phodilus badius</i> |
| <i>Phylloscopus borealis</i> |
| <i>Phylloscopus coronatus</i> |
| <i>Phylloscopus inornatus</i> |
| <i>Phylloscopus schwarzi</i> |
| <i>Phylloscopus tenellipes</i> |
| <i>Pitta moluccensis</i> |
| <i>Pitta sordida</i> |
| <i>Pluvialis squatarola</i> |
| <i>Prinia flaviventris</i> |
| <i>Pycnonotus atriceps</i> |
| <i>Pycnonotus goiavier</i> |
| <i>Pycnonotus melanicterus</i> |
| <i>Rhipidura javanica</i> |
| <i>Spilornis cheela</i> |
| <i>Sterna albifrons</i> |
| <i>Streptopelia chinensis</i> |
| <i>Streptopelia tranquebarica</i> |
| <i>Treron curvirostra</i> |
| <i>Trichastoma abbotti</i> |
| <i>Trichastoma rostratum</i> |
| <i>Tringa sp.</i> |
| <i>Turnix tanki</i> |
| <i>Tyto alba</i> |
| <i>Vanellus indicus</i> |
| <i>Xenus cinereus</i> |
| 122 |

Annex 2: STAKEHOLDER PARTICIPATION PLAN

1. Stakeholder identification

The following stakeholders in the project have been identified following site visits and a literature review.

| Stakeholder | Role |
|---|---|
| Royal Thai Government Departments The Department of Marine and Coastal Resources Royal Forest Department National Parks Department Fisheries Department Community Development Department Harbour Department | Project Co-ordinator, target for training Consultee, target for training Consultee, target for training Consultee Consultee, target for training Target for policy development initiative. |
| Local Government Office of the Governor of Trat Province Coastal districts (Amphur) in Trat Province Coastal Sub district Administration Organizations (Or Bor Tors) | Project 'figurehead' and target for policy initiatives Target for training Implementation, Target for training, Communication with local villagers. |
| Local community and conservation groups Mangrove Conservation and Development Group Thai Environmental Consulting Association 'Truth' Savings and Conservation Group Centre for Learning and Studying Nature and Mangroves Management and Planning for Mangrove Resources Group | Implementation, Target for training, Communication with local villagers. |
| Villagers living in coastal communities Low income groups who depend on mangroves for their livelihoods Small businesspeople who use mangroves for their livelihoods Indigenous fisher folk Women Schoolchildren Low income groups who depend on mangroves for their livelihoods Small businesspeople who use mangroves for their livelihoods | Target groups for conservation activities, awareness campaigns and income generating activities. |
| Conservation organizations Wetlands International – Thailand Project RECOFTC Kung Kraben Royal Project Yadfon Association Mangrove Action Project | Advisory role and networking. |
| Research organizations RECOFTC Universities (yet to be decided: possibly Burapa, Mahidol, Chulalongkorn, or Prince of Songkhla) | Technical advice and research. |

2. Information dissemination and consultation

Information will be disseminated to stakeholders using as wide a range of techniques as possible, with the aim of matching techniques to target groups. Communication at the management level will be through a **project management team** of 5-10 key individuals (including significant representation from women) composed of representatives of the principal stakeholder groups who will make key decisions and determine the strategic direction of the project. Regular community based consultative meetings will draw together stakeholders from a wider group to inform and consult them about project progress and activities.

Organizational stakeholders will be informed about events and activities through notices and letters of invitation. For the general public, **word of mouth and personal invitation** are important means of communication in the Thai context, and so community based organizations such as Or Bor Tors and local conservation groups will be asked to help pass on information to members of the public through their networks.

A regular **project newsletter** will be prepared on a six monthly basis to inform the public about project progress and help emphasise key conservation messages, and wherever possible local **radio and newspapers** will be asked to help publicise project activities.

A range of publications will be produced through the project, ranging from public awareness campaign material to technical publications aimed at specialists working in mangrove conservation.

Networking will be an important part of the project and the project will aim to create opportunities to bring stakeholders of all types together to increase informal contact and communication between them.

Consultation will take place before key project activities take place in the form of meetings with stakeholders for whom the activity has particular relevance. Activities will be guided by the views of stakeholders and tailored to their needs to help ensure that project work is relevant to them. Where necessary, different sectors of the community (for example women, shrimp farmers) will be consulted separately on sensitive or complex issues rather than at open meetings.

3. *Stakeholder participation in planning, decision making, and execution*

A high level of public participation is crucial to the success of this project, and the project will aim to continue the tradition of successful public participation, which has characterized previous mangrove conservation initiatives in the target area.

Efforts to encourage participation from as broad as possible a range of local people will continue throughout the project. The project will be launched with an 'open day' style event, open to all, to celebrate the mangrove conservation work which has already taken place, introduce the project team, and explain the project objectives. The day will include workshop style sessions where participants will be asked to identify priorities, opportunities, and particular needs. Similar high profile events will take place at the project midpoint, where progress will be evaluated and the direction for the second phase set, and at the end of the project, where there will be an opportunity for evaluating lessons learned and discussing sustainability of efforts following cessation of GEF project grant assistance.

On key issues and at key stages during the project, stakeholder meetings will be organized to plan the way forward and make decisions. These will be integrated as far as possible with project forum meetings and participants will be drawn from a similar constituency.

Execution of conservation activities will take place mainly at the level of grassroots organizations and will be led by locally based conservation groups. The groups will plan and organize activities for themselves with support from the project team if required.

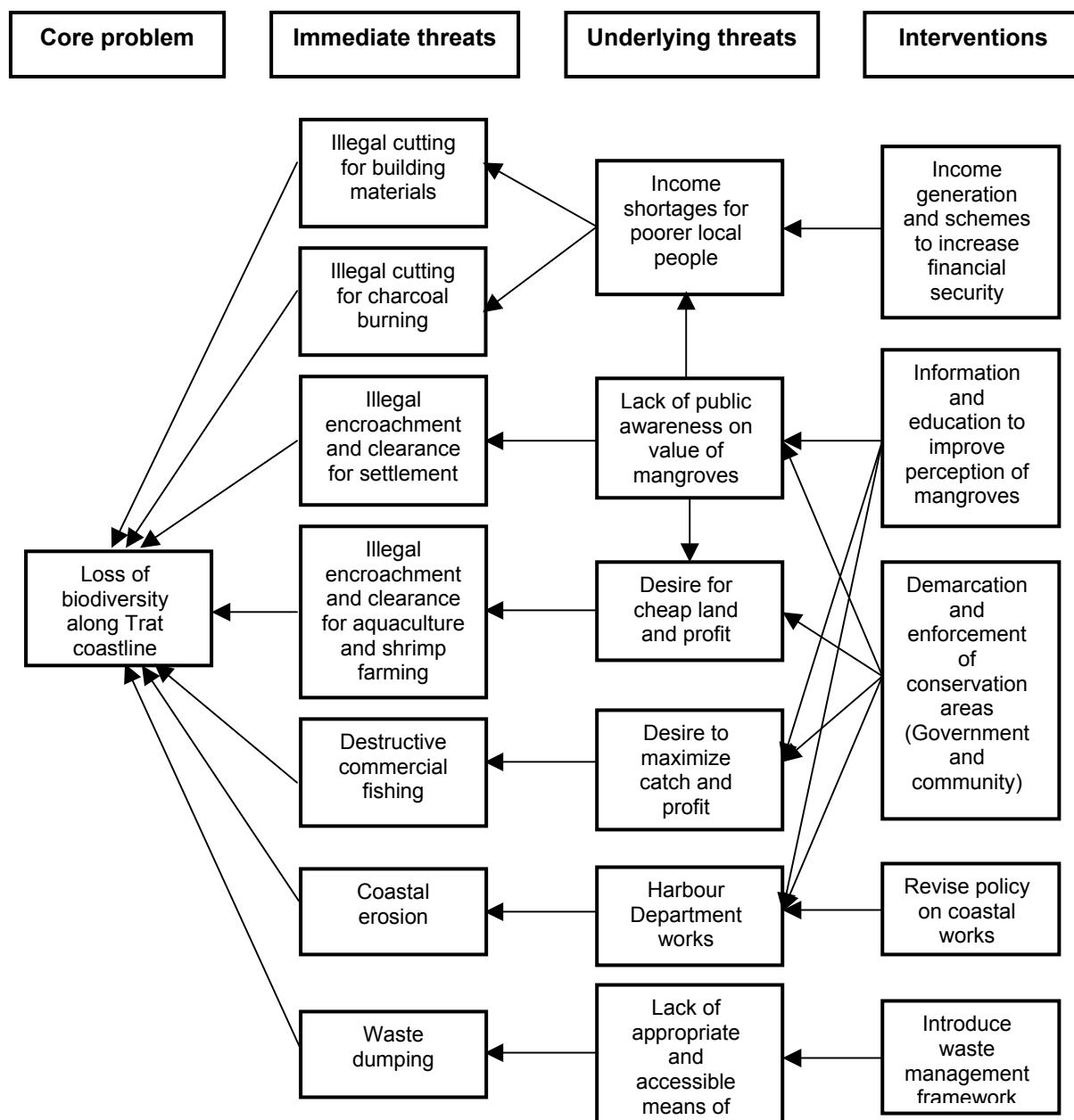
Training activities will probably be led by outside trainers, but to meet objectives agreed beforehand with participants and at times and venues chosen by participants. Training activities organized through the project, and particularly training activities targeted towards local villagers, will be organized using participatory methods. It is anticipated that training work aimed at strengthening the capacity of local grassroots organizations will include an element of training in using participatory approaches to development work.

4. *Social and participation issues*

- Project managers will need to be aware of gender issues during the implementation of the project. Certain project activities will need to be devised with gender roles in mind and in some cases activities should be specifically targeted towards women. This is likely to be particularly important in work relating to income generation and livelihood diversification. Although it is acceptable for men and women to spend time together in Thai society it is common for them to work and socialize separately outside the family.

- The economic aspects of this project will be most effective if they are targeted on the most needy in the community – particularly those on low income. However, it is usually very difficult to involve the most needy in community projects - for example, because they cannot afford to take time out from making a living, or because it is hard to reach them to inform them about an initiative, or simply because they may lack the confidence to join in. In order to reach the needier sections of the target communities a special effort will be required. Locally based facilitators should work with local community groups to make a special effort to invite and encourage the less well off to attend project activities which are relevant to them. The atmosphere at the event should be carefully managed so as not to be intimidating and financial support in the form of a per diem for attendance should be provided.
- Hierarchy and deference to authority have traditionally had an important place in Thai society. Although this is changing, an appreciation of one's place in the social ladder is still often an important factor in rural culture. This can pose challenges to projects based around participatory approaches. A group may expect those in positions of authority to find solutions to problems, rather than look collectively for ways forward. Teachers and leaders are to be listened to and obeyed, rather than treated as equals in a discussion. A suggestion from a senior member of the community is unlikely to meet disagreement from others of lesser status, however impractical it may be. Although these cultural factors are in no way insuperable obstacles to public participation, they need to be kept in mind when planning project activities and wherever possible local facilitators who are aware of such dynamics within the community should be engaged to help run meetings and activities.
- In Thai society presentation is traditionally important, which can sometimes result in form becoming more important than substance, or people 'going through the motions' just to put on a good show. Project managers may need to make a particular effort to ensure that participants fully understand the objectives of activities so as to reduce the risk that effort is wasted or misdirected because the wish to put on a good show becomes more important than the need to take meaningful action.
- The aim of this project is to establish a project to demonstrate successful community participation in mangrove conservation. As a result of a series of initiatives stretching back for several years, local villagers have been heavily exposed to participatory approaches in development work. The project should aid the development of community leaders as effective practitioners in participatory working, not only for the benefit of their own communities, but also so that they can advocate and demonstrate the approach to others who wish to learn from the experiences of the Trat villagers.

Annex 3: CAUSAL CHAIN ANALYSIS



A causal chain analysis has been conducted for the threats to biodiversity in the mangrove forests along the Trat coastline. From the analysis diagram it can be seen that the principal immediate threats relate to illegal cutting of trees and illegal encroachment and settlement into mangrove areas. Interventions identified to tackle these threats are schemes to generate income and financial security; information and education campaigns to increase awareness of the value of mangrove forests; and the establishment and enforcement of conservation areas by government departments and local communities.

The three immediate threats shown at the bottom of the analysis diagram are considered to be lesser threats of secondary importance (particularly coastal erosion and waste dumping) and responses to these threats will therefore have a lower priority among project activities.

Objectives and activities proposed for the project are therefore based around the means of intervention identified through the causal chain analysis. However, it should be noted that the aims of the project are not solely to secure the Trat coastline area against further threats to its biodiversity, but to act as a 'showcase' to demonstrate successful public participation in mangrove conservation and to continue with work to rehabilitate degraded areas. As a result, not all of the activities proposed in the project relate back directly to the causal chain analysis.

Annex 4: BUDGET

Table 1 Budget by component and activity.

| | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments on costings | Possible collaboration with Cambodia |
|--|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|---------|-----------|----------|----------|--------------|--------------|---------------|---|---|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| Component Sub-component Activities | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 1. MANAGEMENT | | | | | | | | | | | | | | | |
| 1.1 Establishment of Management Framework and networks of community based stakeholder groups | | | | | | | | | | | | | | | |
| 1.1.1 Appoint project personnel [site manager, administrative and, finance officer, driver]: | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| Site Manager | 54,000.00 | | | | | | | | | | 0.00 | 54,000.00 | 54,000.00 | 60,000 bt per month | |
| Field officer | 21,600.00 | | | | | | | | | | 0.00 | 21,600.00 | 21,600.00 | 24,000 per mth | |
| Government Officers | | | | | | 76,452.00 | | | | | 76,452.00 | 0.00 | 76,452.00 | | |
| Admin and finance officer | 21,600.00 | | | | | 3,150.00 | | | | | 3,150.00 | 21,600.00 | 24,750.00 | 24,000 per mth | |
| 1.1.2 Establish project office in the Mangrove Resources Research Station Area 4 and establish cross-border communication arrangements | | | | 4,000.00 | | | | | 7,850.00 | 1,500.00 | 9,350.00 | 4,000.00 | 13,350.00 | Office in kind from DMCR. UNEP: Computer, furniture etc | |
| 1.1.3 Formally Establish Trat Management Board and Senior Advisory Group under authority of the DG DMCR. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| 1.1.4 Establish the elements of the community based management framework encompassing 7 villages (Tatapao / Namchieo conservation forest). Define the modes of communication, and frequency of consultations (at least monthly). | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| 1.1.5 Convene quarterly meetings of the Management Board and half yearly meetings of the Senior Advisory Group | | | 5,700.00 | | | | | 13,020.00 | | | 13,020.00 | 5,700.00 | 18,720.00 | 18 meetings, 14 people. For each person food @ 250 bt, per diem @ 300 bt food, also one flight to BKK 4000 bt | |
| 1.1.6 Convene quarterly community meetings of the 21 village representatives in Trat Province. | | | 3,900.00 | | | | | | | | 0.00 | 3,900.00 | 3,900.00 | 12 meetings, 25 people, 500 bt per person | Possible visitors from Cam attend one meeting - also Thai reps go to Cam? |
| 1.1.7 Prepare half yearly progress and expenditure reports for UNEP, Management Board and NTWG. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| 1.1.8 Independent evaluation of project progress at mid-point and end of GEF grant support by a regional expert. | | | | | 9,000.00 | | | | | | 0.00 | 9,000.00 | 9,000.00 | | Possibly carried out by same evaluator? |
| 1.1.9 Prepare and submission of final project summary report to UNEP/GEF. | | | | | 150.00 | | | | | 2,100.00 | 2,100.00 | 150.00 | 2,250.00 | Printing, binding, copying 50 copies: 6000 baht | |

Table 1 continued Budget by component and activity.

| | GEF1000 | | | | | Government | | | | | \$US | \$US | \$US | Comments on costs | Possible collaboration with Cambodia |
|---|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|----------|---------|---------|---------|----------|----------|----------|--|--|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | DMCR | UNEP | Total | | |
| Component Sub-component Activities | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 1.2 Prepare a comprehensive management plan for the habitats and resources of the site including maps of forest areas and designated land uses including conservation areas. | | | | | | | | | | | | | | | |
| 1.2.1 Assemble all existing environmental and socio-economic data into a single comprehensive GIS database; identify information gaps and design necessary baseline surveys. | | 3,000.00 | | | | | 3,000.00 | | | | 3,000.00 | 3,000.00 | 6,000.00 | \$3,000 for both Thailand and Cambodia - assume held in central budget by UNEP SCS | Joint - needs to be same format GIS. Agree format through tech working group. Observer from Cambodia attends to observe. |
| 1.2.2 Conduct an evaluation of current stakeholders' patterns of use through site level social surveys; economic values of habitats and resources net sales value and costs of production | | 3,500.00 | | | | | 2,200.00 | | | | 2,200.00 | 3,500.00 | 5,700.00 | By consultant | Results of survey must be shared. Survey design by technical working group. Cambodia observes survey work? |
| 1.2.3 Undertake rapid baseline surveys as required to assess current condition of mangrove resources, and threats. Preparation of an overall report on: environmental state of mangroves; stakeholder present use, and economic value | | 6,000.00 | | | | | 2,200.00 | | | | 2,200.00 | 6,000.00 | 8,200.00 | By consultant with five graduate survey staff, three months, at least 200,000 baht | Results of survey must be shared. Survey design by technical working group. Cambodia observes survey work? |
| 1.2.4 Organise appropriate consultations at the community (Village Chairperson/head) for clearance of the outputs from 1.2.2 and 1.2.3 above. Provincial government consultations to discuss and clear the report on stakeholder use and economic values | | | 2,500.00 | | | | | | | | 0.00 | 2,500.00 | 2,500.00 | One meeting, 15 people | |
| 1.2.5 Preparation of initial draft management plan based on existing plans, GIS data and initial stakeholder consultations including zoning plans for conservation and marine protection, sustainable use, buffer zones, restoration activities, rules and regulations and actions in response to breach of such rules. | | | 500.00 | | 300.00 | | | | | | 0.00 | 800.00 | 800.00 | Prepared by project staff. Print costs 100 copies 12,000 baht. Stakeholder meetings: 4 meetings, 10 people each, 500 baht per person | Consultation between joint working board and technical working groups. Will be some joint policies. |
| 1.2.6 Review of initial draft by community representatives (7 villages) and meeting/workshop to critically review the draft. | | | 250.00 | | | | | | | | 0.00 | 250.00 | 250.00 | One meeting, 20 key people, 500 baht per person) | |

Table 1 continued Budget by component and activity.

| | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments on costings | Possible collaboration with Cambodia |
|---|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|-----------|----------|---------|----------|--------------|--------------|---------------|---|--|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| Component Sub-component Activities | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| Component Sub-component Activities | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 1.2.7 Revision of the draft including preparation of final maps and charts of use areas and zones | | | | | 375.00 | | | | | | 0.00 | 375.00 | 375.00 | 100 copies, high quality report, 150 baht per copy | |
| 1.2.8 Finalisation and submission of the management plan to management board for recommendation to Provincial Governor and Office of Environmental Policy and Planning for final approval | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| 1.2.9 Immediate Actions to implement the management plan including publication and distribution of use zone maps installation of signpost areas, marker buoys. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Will depend on content of management plan!! Assume in kind from DMCR, 100000 bt costs | |
| 1.2.10 Establish a patrol system and undertake community based patrols. | 9,000.00 | | | | | | | 3,000.00 | | | 3,000.00 | 9,000.00 | 12,000.00 | Funded by DMCR: training for volunteers and rangers (20%), per diem for volunteers (80%). Does not include other enforcement work, which will also be funded by DMCR. | Exchanges between patrols: Thai - Cam visits to observe. |
| 1.2.11 Undertake maintenance activities as programmed in management plan through the work of community members, DMCR staff, or contractors as appropriate. | | | | | | 350,000.00 | | | | | 350,000.00 | 0.00 | 350,000.00 | Funded by DMCR | |
| 1.3 Investigate and identify appropriate reforestation techniques and design and implement replanting and maintenance programme. | | | | | | | | | | | | | | | |
| 1.3.1 Document the processes, success and failures of activities and processes involved in developing co-management of mangrove forests, in the Trat mangrove area. | 350.00 | | | | 350.00 | | | | | 2,100.00 | 2,100.00 | 700.00 | 2,800.00 | To be done by project staff and DMCR staff (5 days, \$70 per day - over and above core 20%) | Exchange information. Joint evaluation will help. |
| 1.3.2 Evaluate previous experience of mangrove restoration in Thailand and identify appropriate techniques for trialling in Trat Province | 450.00 | | | | 1,000.00 | 2,100.00 | | | | | 2,100.00 | 1,450.00 | 3,550.00 | Project staff with consultant (\$70, three days, flight from BKK, 1,500 bt accom and per diem) | Provide information to Cambodia. Study visits from Cambodia to Thailand. |
| 1.3.3 Design in full consultation with local communities a long-term programme of replanting and mangrove restoration in the area | 500.00 | | 2,500.00 | | | 2,100.00 | | 280.00 | | | 2,380.00 | 3,000.00 | 5,380.00 | Consultation meetings in 21 villages, assume 20 people, 200 baht per person. Also facilitator for meeting 1000 baht per day | Exchange information and maybe agree on types of areas. |
| 1.3.4 Undertake pilot activities regarding natural mangrove recolonisation following restoration of hydrological conditions. | | 2,500.00 | | | | | 10,000.00 | | | | 10,000.00 | 2,500.00 | 12,500.00 | UNEP for expert consultancy, DMCR for site work | Technical visitors from Cambodia to observe |

Table 1 continued Budget by component and activity.

| Component <i>Sub-component Activities</i> | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments on costings | Possible collaboration with Cambodia |
|--|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|------------|---------|---------|---------|--------------|--------------|---------------|---|--|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 1.3.5 Undertake regular community mangrove planting activities and twice annual high profile planting events to mark special occasions. | | | | | | | 630,000.00 | | | | 630,000.00 | 0.00 | 630,000.00 | Same contract as 1.3.2. DMCR target for replanting average 2000 rai per year. Six events, UNEP pay event costs: 150 person per event, 200 baht per person food and transport. DMCR pay planting costs @ 4200 bt per rai | Technical visitors from Cambodia to observe |
| 1.3.6 Monitor successes and failures in rehabilitation efforts and prepare guidelines for future use at the community level . | 500.00 | | | | | | | | | | 0.00 | 500.00 | 500.00 | Project staff and small consultancy 20,000 baht | Joint activity looking at both Thai and Cambodia. Joint evaluation will help |
| 2. DEVELOP A BUSINESS PLAN FOR TRAD PROVINCE MANGROVES SUSTAINABLE FINANCING | | | | | | | | | | | | | | | |
| 2.1 Diversification of income sources and improving financial security of local people with low incomes, including identification of new revenue streams and new opportunities | | | | | | | | | | | | | | | |
| 2.1.1 Through community consultation, agree an appropriate and realistic sustainable use strategy for mangrove products and options for development of community businesses based on an analysis of potential future uses, value, net income and costs | | 13,000.00 | | | | | 6,300.00 | | | | 6,300.00 | 13,000.00 | 19,300.00 | Two meetings, 20 people, 500 baht per person. Consultancy - Dr Tanwa? - 500,000 baht minimum | Joint. Needs to be crossborder strategy |
| 2.1.2 Evaluate the feasibility of community businesses based around sustainable uses both current and potential new uses of mangrove resources | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Joint. Needs to be crossborder strategy |
| 2.1.3 Undertake market research. Identify potential pilot activities and sites and, where feasible, promote the establishment of such businesses. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Joint. Needs to be crossborder strategy |
| 2.1.4 Investigate need for funding to stimulate and support community businesses and options for providing funding, including the identification of existing sources of funding and the scope for establishment of a micro-credit scheme | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Joint. Needs to be crossborder strategy |
| 2.1.5 Establishment of micro-financing funds and operation following agreement of disbursement procedures and financial controls. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Joint. Needs to be crossborder strategy |

Table 1 continued Budget by component and activity.

| | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments on costings | Possible collaboration with Cambodia |
|--|-------------------|---------------------------|--|--------------------------------------|-------------------------------|------------|----------|---------|---------|---------|--------------|--------------|---------------|-------------------------------------|--|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| Component Sub-component Activities | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshps, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 2.2 Financial sustainability of Trat Province Mangrove Management framework and plan | | | | | | | | | | | | | | | |
| 2.2.1 Evaluate Provincial level net income and Existing revenue, (through resource and other taxes, licence fees etc.) | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Needs to be joint initiative carried out to similar format as part of same sub-project but not sure if same person can do the job in both countries. |
| 2.2.2 Evaluate existing management costs (government agencies costs) | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Needs to be joint initiative carried out to similar format as part of same sub-project but not sure if same person can do the job in both countries. |
| 2.2.3 Develop an appropriate financial plan based on actual and potential revenue and agreed revenue collection procedures | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Needs to be joint initiative carried out to similar format as part of same sub-project but not sure if same person can do the job in both countries. |
| 2.2.4 Approval and establishment of financial management mechanisms at provincial and community levels | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.1.2 | Needs to be joint initiative carried out to similar format as part of same sub-project but not sure if same person can do the job in both countries. |
| 2.3 Investigate the feasibility of ecotourism locally to generate income and promote the role of the demonstration centre. | | | | | | | | | | | | | | | |
| 2.3.1 Discuss and evaluate ecotourism opportunities with local communities and raise awareness of the meaning and limitations of ecotourism. | | 3,750.00 | | | | | 2,200.00 | | | | 2,200.00 | 3,750.00 | 5,950.00 | Ecotourism consultancy 150,000 baht | Joint. Needs to be crossborder strategy |
| 2.3.2 Identify features of interest (such as fire flies, bird species) and suitable locations. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.3.1. | Joint. Needs to be crossborder strategy |
| 2.3.3 Establish a simple model activity (eg boat tours, boardwalk) to act as an entry point into ecotourism. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.3.1. | Establish in TL but keep Camb informed and arrange visit to observe |
| 2.3.4 Provide training required (eg tour guide training) and establish support structures to promote and maintain the model activity. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Same consultancy as 2.3.1. | Plan training jointly but deliver separately. |

Table 1 continued Budget by component and activity.

| Component Sub-component Activities | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments costings on | Possible collaboration with Cambodia |
|--|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|----------|-----------|---------|---------|--------------|--------------|---------------|---|---|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 3 TRAINING, EDUCATION AND AWARENESS | | | | | | | | | | | | | | | |
| 3.1 Public Awareness: Enhance awareness and understanding of mangroves at all levels of government, civil society, and communities | | | | | | | | | | | | | | | |
| 3.1.1 Develop the existing Learning Centre in Pred Nai Village to help promote demonstration site role and disseminate information materials. | | | | | 3,000.00 | | | | | | 0.00 | 3,000.00 | 3,000.00 | Community project for village. 120,000 baht. Refurbish and redecorate centre | |
| 3.1.2 Prepare exhibition materials for the centre, develop information resources including simple database, displays etc. | | 1,500.00 | | | 1,000.00 | | 2,100.00 | | | | 2,100.00 | 2,500.00 | 4,600.00 | Divide between materials and cost of preparation | |
| 3.1.3 Publicise the role of the Learning Centre through local radio, television and print media arrange a programme of visits by schools and other civil society groups. | | | | | 1,250.00 | | | | | | 0.00 | 1,250.00 | 1,250.00 | Small budget for refreshments, hospitality for formal visits to centre over 3 years. | Cambodian guests visit |
| 3.1.4 Liaise with local media to organise TV and radio broadcasts and news articles about mangrove conservation, demonstration site activities and the project. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Opportunistic basis | Invite press to joint events in Thailand. Maybe investigate scope of Thai TV filming in Camb mangroves? |
| 3.1.5 Prepare quarterly project newsletters for stakeholders. | | | | | 600.00 | | | | | | 0.00 | 600.00 | 600.00 | Print costs 1,000 leaflets, 2 baht each | |
| 3.1.6 Submit at least one paper per year on the major outcomes of the project activities to international research journals. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Preparation of photos / materials / graphics | Maybe paper from joint research project? |
| 3.1.7 Arrange "open days" for the press to visit and view the project's mangrove conservation work when suitable opportunities arise. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Hospitality costs in 3.1.3 above | |
| 3.1.8 Organise annual visits to the site for around 50 community representatives involved in sustainable use of mangroves from outside Trat Province. | | | 3,000.00 | | | | | 12,000.00 | | | 12,000.00 | 3,000.00 | 15,000.00 | National seminar - international speakers can attend. Advertising, venue booking, food, per diems | Cambodian guests can attend with interpreter if they wish |
| 3.2 Training | | | | | | | | | | | | | | | |
| 3.2.1 Undertake training needs assessment and prepare training programme targeting local and provincial government officers, and local communities. Identify in close consultation with the entites concerned needs for specific training in areas such as coastal zone management | | 2,500.00 | | | | | | | | | 0.00 | 2,500.00 | 2,500.00 | DMCR Staff advise (over and above 25% requirement) say 2 days equivalent | |

Table 1 continued Budget by component and activity.

| Component | GEF1000 | | | | | Government | | | | | \$US | \$US | \$US | Comments on costings | Possible collaboration with Cambodia |
|---|----------------|--------------------|--------------------------------|-----------------------------|-------------------------|------------|---------|-----------|---------|---------|-----------|----------|-----------|--|--|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | DMCR | UNEP | Total | | |
| | 1000 Personnel | 2000 Sub-contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 3.2.2 Implement the training programme at the community level; it is envisaged that training needs may include but not be limited to: financial management and basic business skills based around sustainable use of mangroves.; principles and practice of community forest management; technical monitoring for selected local people (eg salinity monitoring, identification of acid sulphate soils areas, tree growth monitoring and presentation/interpretation of scientific data). | | | 4,800.00 | | | | | 4,300.00 | | | 4,300.00 | 4,800.00 | 9,100.00 | 4 courses: local people. 2 x 2 days, 2 x 1 day. 50 people per course 500 baht per day including per diem. Trainers fees 2,500 baht per day, plus travel (assume 2 flights from BKK at 4,000 baht each) | Standing invitation for Cambodian guests to attend training events as part of capacity building programme. |
| 3.2.3 Undertake training in enforcement for community volunteers. | | | 1,500.00 | | | | | 12,000.00 | | | 12,000.00 | 1,500.00 | 13,500.00 | | Standing invitation for Cambodian guests to attend training events as part of capacity building programme. |
| 3.2.4 Implement the targeted training programme for government agencies and personnel. It is envisaged that training needs may include but not be limited to training for harbours staff on coastal transport modelling, erosion prevention, and sustainable alternatives to 'hard' coast defences. | | | 1,250.00 | | | | | 1,100.00 | | | 1,100.00 | 1,250.00 | 2,350.00 | 2 courses: govt officials, 1 day, 50 people per day, 500 baht per person plus per diem | Standing invitation for Cambodian guests to attend training events as part of capacity building programme. |
| 3.2.5 Identify opportunities for group study tours (including DMCR mangrove management staff and selected NGO and community group members from Trat Province) to selected mangrove management sites in the South China Sea region. | | | 5,250.00 | | | | | 1,100.00 | | | 1,100.00 | 5,250.00 | 6,350.00 | 1 trip: three people, three days, 30,000 baht per person including flight for one trip eg Vietnam, Philippines. 1 trip to Cambodia, six people, three days, 20000 baht per person. Key technical staff | Include sites in Cambodia |
| 3.2.6 Arrange appropriate workshops to learn from and network with communities engaged in similar activities. | | | 1,500.00 | | | | | 3,300.00 | | | 3,300.00 | 1,500.00 | 4,800.00 | One meeting joint Thai - Cambodia, 15 people, govt / NGO / community reps, 500 baht per person per day | One meeting in Thailand with representatives from Thailand: 15 people from each side, Govt / NGO / community |
| 3.3 Education / publicity | | | | | | | | | | | | | | | |
| 3.3.1 Prepare and distribute posters, brochures and booklets on topics of relevance to mangroves and coastal management as identified in the training needs assessment. | | | | | 5,000.00 | | | | | | 0.00 | 5,000.00 | 5,000.00 | Design and printing costs, 250 copies of poster, Trat / Cambodia mangroves booklet, three technical publications 16 pages each, 200 baht each High quality finish | Common format translated into each language |

Table 1 continued Budget by component and activity.

| Component <i>Sub-component Activities</i> | GEF1000 | | | | | Government | | | | | \$US DMCR | \$US UNEP | \$US Total | Comments <i>costings</i> | Possible collaboration with Cambodia |
|---|-------------------|---------------------------|---|--------------------------------------|-------------------------------|------------|---------|----------|---------|----------|--------------|--------------|---------------|--|---|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | | | | | |
| | 1000 Personnel | 2000 Sub- contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| 3.3.2 Develop appropriate targeted educational material about the ecology and value of mangroves to inform and educate local school children (30+ primary schools, 10 secondary schools) about the value of mangroves and the benefits of a sustainable approach to development.. | | | | | 7,500.00 | | | | | | 0.00 | 7,500.00 | 7,500.00 | Consultants advice from WITP on targeting and design: 2 days @ \$70 / day. Production and design costs: complete guess !! based on costs for 3.3.1 x 1.5 | Common format translated into each language. Subcontract eg to Wetlands International |
| 3.3.3 Print and distribute educational material through appropriate channels. | | | | | | | | | | | 0.00 | 0.00 | 0.00 | Included in previous two activities | Print in one place, distribute sepately. |
| 3.3.4 Organise 3 youth camps | | | 4,500.00 | | | | | 6,300.00 | | | 6,300.00 | 4,500.00 | 10,800.00 | | |
| 3.3.5 Organise 3 community events/theme days 30 people per event including press and media In-kind support costed elsewhere | | | 3,200.00 | | | | | | | | 0.00 | 3,200.00 | 3,200.00 | | |
| 3.3.5 National/Regional Annual conference/working meeting on mangrove status and rehabilitation - GEF budget for regional and international participation, Co-financing for national participation | | | 45,000.00 | | | | | | | 3,300.00 | 3,300.00 | 45,000.00 | 48,300.00 | | |

Table 1 continued Budget by component and activity.

| Component <i>Sub-component Activities</i> | GEF1000 | | | | | Government | | | | | \$US | \$US | \$US | Comments on costings | Possible collaboration with Cambodia |
|---|-------------------|--------------------|--------------------------------|-----------------------------|-------------------------|-------------------|-------------------|------------------|------------------|-----------------|---------------------|-------------------|---------------------|---|--------------------------------------|
| | GEF1000 | GEF2000 | GEF3000 | GEF4000 | GEF5000 | GOV1000 | GOV2000 | GOV3000 | GOV4000 | GOV5000 | DMCR | UNEP | Total | | |
| | 1000 Personnel | 2000 Sub-contracts | Training, mtgs, wkshops, tours | 4000 Equipment and premises | 5000 Misc and reporting | 1000 | 2000 | 3000 | 4000 | 5000 | | | | | |
| JOINT ACTIVITIES WITH CAMBODIA | | | | | | | | | | | | | | | |
| Set up joint management board | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| Set up technical working group | | | | | | | | | | | 0.00 | 0.00 | 0.00 | | |
| Joint management board meetings (alternate in each country) | | | 9,000.00 | | | | | 3,920.00 | | | 3,920.00 | 9,000.00 | 12,920.00 | Two meetings: local costs, two meetings: travel to Cambodia. 14 people: travel to Cambodia 5,000 baht, local meeting costs 550 baht per person for 30 people plus 4 flights from Bangkok @4,000 baht | |
| Initial Joint Technical Workshops to define baseline requirements | | | 4,000.00 | | | | | 2,800.00 | | | 2,800.00 | 4,000.00 | 6,800.00 | | |
| Programme of joint technical workshops | | | 6,000.00 | | | | | 8,400.00 | | | 8,400.00 | 6,000.00 | 14,400.00 | Two streams: biological/ GIS, socio-economic. Three meetings per year each stream. One person per night in Cambodia: 5000 baht. Five people per meeting from Thailand. Three flights from BKK (Dr Anond) @4,000 bt) | |
| MISCELLANEOUS | | | | | | | | | | | | | | | |
| Sundries / postage / disposables / audit fees etc. | | | | 3,600.00 | 2,400.00 | | | | 3,000.00 | | 3,000.00 | 6,000.00 | 9,000.00 | 3000 baht per month | |
| Translation and Interpretation | | | | | 7,500.00 | | | | | | 0.00 | 7,500.00 | 7,500.00 | 400 baht per page, 500 pages. 2,000 baht per day spoken, 25 days. | |
| Staff Travel (Cambodia) (act.1.1.6) | 4,250.00 | | | | | | | | | | 0.00 | 4,250.00 | 4,250.00 | | |
| Staff Travel (Local road travel) | 4,500.00 | | | | | 15,000.00 | | | | | 15,000.00 | 4,500.00 | 19,500.00 | | |
| Staff travel (internal air travel) | 1,750.00 | | | | | | | | | | 0.00 | 1,750.00 | 1,750.00 | | |
| Staff Travel (Regional/International) | 3,250.00 | | | | | | | | | | 0.00 | 3,250.00 | 3,250.00 | | |
| Senior Professional Consultants for advice/guidance to management board and site manager on specific tasks - 3 man/mths per year activities to be defined between July 2004 and June 30th 2005. | 4,500.00 | | | | | | | | | | 0.00 | 4,500.00 | 4,500.00 | | |
| Technical consultants to Site Manager and Field Officer 3 man/mths per year for GEF 30 days Gov Officers from Bangkok | 14,000.00 | | | | | 6,000.00 | | | | | 6,000.00 | 14,000.00 | 20,000.00 | | |
| Masters student GIS | | | 9,000.00 | | | | | 6,900.00 | | | 6,900.00 | 9,000.00 | 15,900.00 | | |
| Masters student social sciences/community forestry | | | 9,000.00 | | | | | 6,900.00 | | | 6,900.00 | 9,000.00 | 15,900.00 | | |
| Masters student biological sciences, biodiversity | | | 9,000.00 | | | | | 6,900.00 | | | 6,900.00 | 9,000.00 | 15,900.00 | | |
| TOTAL | 140,250.00 | 35,750.00 | 131,350.00 | 7,600.00 | 39,425.00 | 454,802.00 | 658,000.00 | 92,220.00 | 10,850.00 | 9,000.00 | 1,224,872.00 | 354,375.00 | 1,579,247.00 | | |

Table 2

Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|-------------|---|---------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------------|-----------------|----------------|----------------|
| | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| 1000 | PROJECT PERSONNEL COMPONENT | | | | | | | | | | | | |
| | 1100 Project Personnel w/m (Show title/grade) | | | | | | | | | | | | |
| | 1101 F/T Site Manager (act. 1.1.1.1) | 18,000 | 0 | 18,000 | 18,000 | 0 | 18,000 | 18,000 | 0 | 18,000 | 54,000 | 0 | 54,000 |
| | 1102 F/T Field Officer (act. 1.1.1.1) | 7,200 | 0 | 7,200 | 7,200 | 0 | 7,200 | 7,200 | 0 | 7,200 | 21,600 | 0 | 21,600 |
| | 1103 F/T Admin & Finance Officer (act. 1.1.1.1) | 7,200 | 0 | 7,200 | 7,200 | 0 | 7,200 | 7,200 | 0 | 7,200 | 21,600 | 0 | 21,600 |
| | 1104 Gov't Officer's paid through DCMR Chief of Mangrove Development Station | 0 | 5,384 | 5,384 | 0 | 5,384 | 5,384 | 0 | 5,384 | 5,384 | 0 | 16,152 | 16,152 |
| | 1105 Gov't Officer's paid through DCMR Chief of Mangrove Research Station | 0 | 5,976 | 5,976 | 0 | 5,976 | 5,976 | 0 | 5,976 | 5,976 | 0 | 17,928 | 17,928 |
| | 1106 Gov't Officer's paid through DCMR Director Mangrove Management Division No. 1 | 0 | 10,124 | 10,124 | 0 | 10,124 | 10,124 | 0 | 10,124 | 10,124 | 0 | 30,372 | 30,372 |
| | 1108 Activity 1.2.10 Forest Patrols by rangers and community volunteers from 21 villages | 0 | 0 | 0 | 0 | 3,000 | 3,000 | 9,000 | 9,000 | 18,000 | 9,000 | 12,000 | 21,000 |
| | 1109 Activity 1.2.11 Forest Maintenance (weeding, pruning, thinning and channel maintenance) approximately 85-90 people employed through government. | 0 | 70,000 | 70,000 | 0 | 140,000 | 140,000 | 0 | 140,000 | 140,000 | 0 | 350,000 | 350,000 |
| | 1199 Total | 32,400 | 91,484 | 123,884 | 32,400 | 164,484 | 196,884 | 41,400 | 170,484 | 211,884 | 106,200 | 426,452 | 532,652 |
| | 1200 Consultants w/m (Give description of activity/service) | | | | | | | | | | | | |
| | 1201 Technical consultants to Site Manager and Field Officer 3 man/mths per year for GEF 30 days Gov Officers from Bangkok | 5,500 | 2,000 | 7,500 | 5,000 | 2,000 | 7,000 | 3,500 | 2,000 | 5,500 | 14,000 | 6,000 | 20,000 |
| | 1202 1.3.1 Consultant to assist in production of the final review of success and failures of activities and processes involved in co-management of mangrove forests, in the Trat mangrove area. | 0 | 0 | 0 | 0 | 0 | 0 | 350 | 0 | 350 | 350 | 0 | 350 |
| | 1203 1.3.2 preparation of a review of previous experience with mangrove re-habilitation in Thailand and identification of appropriate techniques for trialling in Trat Province. In-kind inputs from specialists | 450 | 2,100 | 2,550 | 0 | 0 | 0 | 0 | 0 | 0 | 450 | 2,100 | 2,550 |
| | 1204 1.3.3 Consultancy to assist in design of the long-term re-habilitation programme | 500 | 2,100 | 2,600 | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 2,100 | 2,600 |
| | 1205 Monitoring of replanting and preparation of guidelines on replanting 1.3.6 | 0 | 0 | 0 | 200 | 0 | 200 | 300 | 0 | 300 | 500 | 0 | 500 |
| | 1206 Senior Professional Consultants for advice/guidance to management board and site manager on specific tasks - 3 man/mths per year activities to be defined between July 2004 and June 30th 2005. Including activity 3.3.2 | 500 | 0 | 500 | 2,000 | 0 | 2,000 | 2,000 | 0 | 2,000 | 4,500 | 0 | 4,500 |
| | 1299 Total | 6,950 | 6,200 | 13,150 | 7,200 | 2,000 | 9,200 | 6,150 | 2,000 | 8,150 | 20,300 | 10,200 | 30,500 |

Table 2 continued Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|-------------|--|---------------|----------------|----------------|---------------|----------------|----------------|---------------|----------------|----------------|-----------------|----------------|----------------|
| | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 1300 Administrative support w/m (Show title/grade) | | | | | | | | | | | | |
| | 1301 Gov't Secretarial support staff paid through DCMR | 0 | 450 | 450 | 0 | 450 | 450 | 0 | 450 | 450 | 0 | 1,350 | 1,350 |
| | 1302 Gov't research assistant, support staff paid through DCMR | 0 | 600 | 600 | 0 | 600 | 600 | 0 | 600 | 600 | 0 | 1,800 | 1,800 |
| | 1399 Total | 0 | 1,050 | 1,050 | 0 | 1,050 | 1,050 | 0 | 1,050 | 1,050 | 0 | 3,150 | 3,150 |
| | 1400 Volunteers w/m | | | | | | | | | | | | |
| | 1401 | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| | 1499 Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1600 Travel on official business | | | | | | | | | | | | |
| | 1601 Staff Travel (Cambodia) (act.1.1.6) | 1,250 | 0 | 1,250 | 1,500 | 0 | 1,500 | 1,500 | 0 | 1,500 | 4,250 | 0 | 4,250 |
| | 1602 Staff Travel (Local road travel) | 1,500 | 5,000 | 6,500 | 1,500 | 5,000 | 6,500 | 1,500 | 5,000 | 6,500 | 4,500 | 15,000 | 19,500 |
| | 1603 Staff travel (internal air travel) | 1,000 | 0 | 1,000 | 500 | 0 | 500 | 250 | 0 | 250 | 1,750 | 0 | 1,750 |
| | 1604 Staff Travel (Regional/International) | 0 | 0 | 0 | 0 | 0 | 0 | 3,250 | 0 | 3,250 | 3,250 | 0 | 3,250 |
| | 1699 Total | 3,750 | 5,000 | 8,750 | 3,500 | 5,000 | 8,500 | 6,500 | 5,000 | 11,500 | 13,750 | 15,000 | 28,750 |
| | 1999 Component Total | 43,100 | 103,734 | 146,834 | 43,100 | 172,534 | 215,634 | 54,050 | 178,534 | 232,584 | 140,250 | 454,802 | 595,052 |
| 2000 | SUB-CONTRACT COMPONENT | | | | | | | | | | | | |
| | 2100 Sub-contracts (MoU's/LA's for UN cooperating agencies) | | | | | | | | | | | | |
| | 2101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2199 Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2200 Sub-contracts (MoU's/LA's for non-profit SOs) | | | | | | | | | | | | |
| | 2201 Activity 1.2.1 Contract with SEA START-RC 30 days in-kind from local staff | 2,500 | 2,200 | 4,700 | 500 | 800 | 1,300 | 0 | 0 | 0 | 3,000 | 3,000 | 6,000 |
| | 2202 1.2.2 Evaluation of current stakeholders' patterns of use through site level social surveys; economic values of habitats and resources net sales value and costs of production. 30 man days in-kind from local staff | 2,000 | 1,100 | 3,100 | 1,500 | 1,100 | 2,600 | 0 | 0 | 0 | 3,500 | 2,200 | 5,700 |
| | 2203 1.2.3 Undertake rapid baseline surveys as required to assess current condition of mangrove resources, and threats Preparation of an overall report on: environmental state of mangroves; stakeholder present use, and economic value. 30 man days from local staff | 4,000 | 1,100 | 5,100 | 2,000 | 1,100 | 3,100 | 0 | 0 | 0 | 6,000 | 2,200 | 8,200 |
| | 2204 1.3.4 Design and oversee pilot activities regarding natural mangrove recolonisation following restoration of hydrological conditions. | 0 | 0 | 0 | 2,500 | 10,000 | 12,500 | 0 | 0 | 0 | 2,500 | 10,000 | 12,500 |
| | 2205 1.3.5 Undertake regular community mangrove planting activities and twice annual high profile planting events to mark special occasions. Target is around 300 hectares of plantation per year via community contracts, hired labour and individual grants as appropriate | 0 | 126,000 | 126,000 | 0 | 252,000 | 252,000 | 0 | 252,000 | 252,000 | 0 | 630,000 | 630,000 |

Table 2 continued Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|------|---------------------------|--|-------|------------|---------------|----------------|----------------|---------------|----------------|----------------|-----------------|----------------|----------------|
| | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 2206 | 0 | 0 | 0 | 5,000 | 2,100 | 7,100 | 8,000 | 4,200 | 12,200 | 13,000 | 6,300 | 19,300 |
| | 2207 | 0 | 0 | 0 | 3,750 | 2,200 | 5,950 | 0 | 0 | 0 | 3,750 | 2,200 | 5,950 |
| | 2208 | 1,500 | 2,100 | 3,600 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 | 2,100 | 3,600 |
| | 2209 | 2,500 | 0 | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 | 2,500 | 0 | 2,500 |
| | 2299 | Total | | | 12,500 | 132,500 | 145,000 | 15,250 | 269,300 | 284,550 | 8,000 | 256,200 | 264,200 |
| | 2300 | Sub-contracts (commercial purposes) | | | | | | | | | | | |
| | 2301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2399 | Total | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2999 | Component Total | | | 12,500 | 132,500 | 145,000 | 15,250 | 269,300 | 284,550 | 8,000 | 256,200 | 264,200 |
| 3000 | TRAINING COMPONENT | | | | | | | | | | | | |
| | 3100 | Fellowships (total stipend/fees, travel, costs, etc) | | | | | | | | | | | |
| | 3101 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 9,000 | 6,900 | 15,900 |
| | 3102 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 9,000 | 6,900 | 15,900 |
| | 3103 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 3,000 | 2,300 | 5,300 | 9,000 | 6,900 | 15,900 |
| | 3199 | Total | | | 9,000 | 6,900 | 15,900 | 9,000 | 6,900 | 15,900 | 27,000 | 20,700 | 47,700 |
| | 3200 | Group training (study tours, field trips, workshops, seminars, etc) | | | | | | | | | | | |
| | 3201 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,000 | 3,000 | 0 | 3,000 | 3,000 |
| | 3202 | 0 | 0 | 0 | 1,000 | 4,000 | 5,000 | 2,000 | 8,000 | 10,000 | 3,000 | 12,000 | 15,000 |

Table 2 continued Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|--|-------------|---|--------------|----------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------|---------------|
| | | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 3203 | 3.2.2 Implement the training programme at the community level; it is envisaged that training needs may include but not be limited to: financial management and basic business skills based around sustainable use of mangroves.; principles and practice of community forest management; technical monitoring for selected local people (eg salinity monitoring, identification of acid sulphate soils areas, tree growth monitoring and presentation/interpretation of scientific data). | 1,200 | 0 | 1,200 | 2,400 | 3,200 | 5,600 | 1,200 | 1,100 | 2,300 | 4,800 | 4,300 | 9,100 |
| | 3204 | 3.2.3 Undertake training in enforcement for community volunteers. | 0 | 0 | 0 | 750 | 6,000 | 6,750 | 750 | 6,000 | 6,750 | 1,500 | 12,000 | 13,500 |
| | 3205 | 3.2.4 Implement the targeted training programme for government agencies and personnel. It is envisaged that training needs may include but not be limited to training for harbours staff on coastal transport modelling, erosion prevention, and sustainable alternatives to 'hard' coast defences. | 0 | 0 | 0 | 1,250 | 1,100 | 2,350 | 0 | 0 | 0 | 1,250 | 1,100 | 2,350 |
| | 3206 | 3.2.5 Identify opportunities for and execute group study tours (including DMCR mangrove management staff and selected NGO and community group members from Trat Province) to selected mangrove management sites in the South China Sea region. | 0 | 0 | 0 | 0 | 0 | 0 | 5,250 | 1,100 | 6,350 | 5,250 | 1,100 | 6,350 |
| | 3207 | 3.2.6 Arrange appropriate workshops to learn from and network with communities engaged in similar activities. | 0 | 0 | 0 | 500 | 1,100 | 1,600 | 1,000 | 2,200 | 3,200 | 1,500 | 3,300 | 4,800 |
| | 3208 | 3.3.4 Organise and implement 3 youth camps, for 50 children, 4 days each. | 0 | 0 | 0 | 3,000 | 4,200 | 7,200 | 1,500 | 2,100 | 3,600 | 4,500 | 6,300 | 10,800 |
| | 3299 | Total | 1,200 | 0 | 1,200 | 8,900 | 19,600 | 28,500 | 11,700 | 23,500 | 35,200 | 21,800 | 43,100 | 64,900 |
| | 3300 | Meetings/conferences (give title) | | | | | | | | | | | | |
| | 3301 | 1.1.5 Quarterly meetings of the Management Board | 1,400 | 3,360 | 4,760 | 1,400 | 3,360 | 4,760 | 1,400 | 3,360 | 4,760 | 4,200 | 10,080 | 14,280 |
| | 3302 | 1.1.5 Half yearly meetings of the Senior Advisory Group | 500 | 980 | 1,480 | 500 | 980 | 1,480 | 500 | 980 | 1,480 | 1,500 | 2,940 | 4,440 |
| | 3303 | 1.1.6 Quarterly community meetings of the 21 village representatives in Trat Province. | 1,300 | 0 | 1,300 | 1,300 | 0 | 1,300 | 1,300 | 0 | 1,300 | 3,900 | 0 | 3,900 |
| | 3304 | Joint meetings of the management board alternately in Thailand and Cambodia (Thai costs only) | 3,000 | 1,960 | 4,960 | 3,000 | 980 | 3,980 | 3,000 | 980 | 3,980 | 9,000 | 3,920 | 12,920 |
| | 3305 | Joint Technical workshops (2) with Cambodian participation on GIS baseline, ecological and environmental rapid survey techniques and data formats and one on social and economic survey design regarding current and future uses and economic values. In-kind 8 Thai participants 5 days | 4,000 | 2,800 | 6,800 | 0 | 0 | 0 | 0 | 0 | 0 | 4,000 | 2,800 | 6,800 |
| | 3306 | On-going programme of joint technical workshops to exchange data and experiences between Cambodia and Thailand | 2,500 | 2,800 | 5,300 | 2,500 | 2,800 | 5,300 | 1,000 | 2,800 | 3,800 | 6,000 | 8,400 | 14,400 |

Table 2 continued Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|------|---|---|--------|--------|------------|--------|--------|------------|--------|--------|------------|-----------------|--------|-------------|
| | | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 3307 | 1.2.4 Organise appropriate consultations at the community (Village Chairperson/head) for initial consultations and clearance of the outputs from 1.2.2 and 1.2.3 above. Provincial government consultations to discuss and clear the report on stakeholder use and economic value. | 2,500 | 0 | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 | 2,500 | 0 | 2,500 |
| | 3308 | 1.2.5 Initial stakeholder consultations on the management plan including zoning plans for conservation and marine protection, sustainable use, buffer zones, restoration activities, rules and regulations and actions in response to breach of such rules. 4 meetings 10 participants each | 0 | 0 | 0 | 500 | 0 | 500 | 0 | 0 | 0 | 500 | 0 | 500 |
| | 3309 | 1.2.6 Review of initial draft by community representatives (7 villages) and one meeting/workshop with 20-25 participants to critically review the draft. | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 250 | 250 | 0 | 250 |
| | 3310 | 1.3.3 Community based meetings in 21 villages 20 people per meeting to Design a long-term programme of replanting and mangrove restoration in Trat Province include local press media as appropriate | 1,250 | 140 | 1,390 | 1,250 | 140 | 1,390 | 0 | 0 | 0 | 2,500 | 280 | 2,780 |
| | 3311 | 3.3.4 Organise 3 community events/theme days 30 people per event including press and media In-kind support costed elsewhere | 0 | 0 | 0 | 1,600 | 0 | 1,600 | 1,600 | 0 | 1,600 | 3,200 | 0 | 3,200 |
| | 3312 | 3.3.4 National/Regional Annual conference/working meeting on mangrove status and rehabilitation - GEF budget for regional and international participation, Co-financing for national participation | 0 | 0 | 0 | 15,000 | 0 | 15,000 | 30,000 | 0 | 30,000 | 45,000 | 0 | 45,000 |
| | 3399 | Total | 16,450 | 12,040 | 28,490 | 27,050 | 8,260 | 35,310 | 39,050 | 8,120 | 47,170 | 82,550 | 28,420 | 110,970 |
| | 3999 | Component Total | 26,650 | 18,940 | 45,590 | 44,950 | 34,760 | 79,710 | 59,750 | 38,520 | 98,270 | 131,350 | 92,220 | 223,570 |
| 4000 | EQUIPMENT & PREMISES COMPONENT | | | | | | | | | | | | | |
| | 4100 | Expendable equipment (items under (\$1,500 each, for example) | | | | | | | | | | | | |
| | 4101 | Office supplies | 1,000 | 1,000 | 2,000 | 1,000 | 1,000 | 2,000 | 800 | 1,000 | 1,800 | 2,800 | 3,000 | 5,800 |
| | 4102 | Library acquisitions and computer software | 800 | 0 | 800 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 800 |
| | 4199 | Total | 1,800 | 1,000 | 2,800 | 1,000 | 1,000 | 2,000 | 800 | 1,000 | 1,800 | 3,600 | 3,000 | 6,600 |
| | 4200 | Non-expendable equipment (computers, office equip, etc) | | | | | | | | | | | | |
| | 4201 | Computers (act. 1.1.2) | 2,000 | 0 | 2,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000 | 0 | 2,000 |
| | 4202 | Printers | 500 | 0 | 500 | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 0 | 500 |
| | 4203 | Equipment unspecified | 1,500 | 0 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 | 0 | 1,500 |
| | 4205 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 4299 | Total | 4,000 | 0 | 4,000 | 0 | 0 | 0 | 0 | 0 | 0 | 4,000 | 0 | 4,000 |

Table 2 *continued* Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|--|--|--------------|--------------|---------------|--------------|--------------|--------------|------------|--------------|--------------|-----------------|---------------|---------------|
| | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 4300 Premises (office rent, maintenance, of premises, etc) | | | | | | | | | | | | |
| | 4301 Office rent | 0 | 1,450 | 1,450 | 0 | 1,450 | 1,450 | 0 | 1,450 | 1,450 | 0 | 4,350 | 4,350 |
| | 4302 Furniture (act. 1.1.2) | 0 | 2,000 | 2,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000 | 2,000 |
| | 4303 unspecified costs (act.1.1.2) | 0 | 1,500 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 | 1,500 |
| | 4399 Total | 0 | 4,950 | 4,950 | 0 | 1,450 | 1,450 | 0 | 1,450 | 1,450 | 0 | 7,850 | 7,850 |
| | 4999 Component Total | 5,800 | 5,950 | 11,750 | 1,000 | 2,450 | 3,450 | 800 | 2,450 | 3,250 | 7,600 | 10,850 | 18,450 |
| | 5000 MISCELLANEOUS COMPONENT | | | | | | | | | | | | |
| | 5100 Operation and maintenance of equip. | | | | | | | | | | | | |
| | 5101 Rental & maintenance of equipment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5102 Rental of meeting rooms & equip. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5199 Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5200 Reporting costs (publications, maps, newsletters, printing, etc) | | | | | | | | | | | | |
| | 5201 1.2.5 Preparation and printing of initial draft management plan based on existing plans, and GIS data and maps | 0 | 0 | 0 | 300 | 0 | 300 | 0 | 0 | 0 | 300 | 0 | 300 |
| | 5202 1.2.7 and 1.2.9 Finalisation of the Management Plan including preparation of final maps and charts of use areas and zones | 0 | 0 | 0 | 375 | 0 | 375 | 0 | 0 | 0 | 375 | 0 | 375 |
| | 5203 1.1.9 Printing of final report to UNEP & DMCR | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 2,100 | 2,250 | 150 | 2,100 | 2,250 |
| | 5204 1.3.1 Publish a review of the success and failures of activities and processes involved in developing co-management of mangrove forests, in the Trat mangrove area. | 0 | 0 | 0 | 0 | 0 | 0 | 350 | 2,100 | 2,450 | 350 | 2,100 | 2,450 |
| | 5205 1.3.2 Translation and publication of evaluation of previous experience of mangrove restoration in Thailand and identify appropriate techniques for trialling in Trat Province | 1,000 | 0 | 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 0 | 1,000 |
| | 5206 3.1.2. Prepare exhibition materials for the centre, develop information resources including simple database, displays etc. | 0 | 0 | 0 | 1,000 | 0 | 1,000 | 0 | 0 | 0 | 1,000 | 0 | 1,000 |
| | 5207 Develop and print public awareness materials for distribution through the existing Learning Centre in Pred Nai Village to help promote demonstration site role | 1,500 | 0 | 1,500 | 1,500 | 0 | 1,500 | 0 | 0 | 0 | 3,000 | 0 | 3,000 |
| | 5208 3.1.5 Prepare quarterly project newsletters for stakeholders. | 200 | 0 | 200 | 200 | 0 | 200 | 200 | 0 | 200 | 600 | 0 | 600 |
| | 5209 3.3.1 Prepare and distribute posters, brochures and booklets on topics of relevance to mangroves and coastal management as identified in the training needs assessment. | 3,000 | 0 | 3,000 | 2,000 | 0 | 2,000 | 0 | 0 | 0 | 5,000 | 0 | 5,000 |

Table 2 continued Budget by object of expenditure (Figures in red indicate in-kind co-financing, in black cash co-financing).

| | | | 2005 | | | 2006 | | | 2007 | | | TOTAL ALL YEARS | | |
|--|-------------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|------------------|------------------|
| | | | GEF | GOV | Total 2005 | GEF | GOV | Total 2006 | GEF | GOV | Total 2007 | GEF | GOV'T | All Sources |
| | 5210 | 3.3.2 Develop appropriate targeted educational material about the ecology and value of mangroves to inform and educate local school children (30+ primary schools, 10 secondary schools) about the value of mangroves and the benefits of a sustainable approach to development.. | 4,000 | 0 | 4,000 | 3,500 | 0 | 3,500 | 0 | 0 | 0 | 7,500 | 0 | 7,500 |
| | 5211 | Translation approximately 500 pages English/Thai and Thai/Khmer | 2,500 | 0 | 2,500 | 2,500 | 0 | 2,500 | 1,000 | 0 | 1,000 | 6,000 | 0 | 6,000 |
| | 5212 | Interpretation Thai/Khymer/English approximately 30 days | 500 | 0 | 500 | 500 | 0 | 500 | 500 | 0 | 500 | 1,500 | 0 | 1,500 |
| | 5299 | Total | 12,700 | 0 | 12,700 | 11,875 | 0 | 11,875 | 2,200 | 4,200 | 6,400 | 26,775 | 4,200 | 30,975 |
| | 5300 | Sundry (communications, postage, freight, clearance charges, etc) | | | | | | | | | | | | |
| | 5301 | Communication | 300 | 300 | 600 | 300 | 300 | 600 | 300 | 300 | 600 | 900 | 900 | 1,800 |
| | 5302 | postage/freight | 200 | 200 | 400 | 200 | 200 | 400 | 200 | 200 | 400 | 600 | 600 | 1,200 |
| | 5303 | Audit fees | 300 | 0 | 300 | 300 | 0 | 300 | 300 | 0 | 300 | 900 | 0 | 900 |
| | 5399 | Total | 800 | 500 | 1,300 | 800 | 500 | 1,300 | 800 | 500 | 1,300 | 2,400 | 1,500 | 3,900 |
| | 5400 | Hospitality and entertainment | | | | | | | | | | | | |
| | 5401 | 3.1.3 Publicise the role of the Learning Centre through local radio, television and print media arrange a programme of visits by schools and other civil society groups. | 250 | 1,100 | 1,350 | 500 | 1,100 | 1,600 | 500 | 1,100 | 1,600 | 1,250 | 3,300 | 4,550 |
| | 5499 | Total | 250 | 1,100 | 1,350 | 500 | 1,100 | 1,600 | 500 | 1,100 | 1,600 | 1,250 | 3,300 | 4,550 |
| | 5500 | Evaluation (consultants fees/travel/DSA, admin support, etc.) | | | | | | | | | | | | |
| | 5501 | Evaluation (consultants fees/travel/DSA) | 0 | 0 | 0 | 4,500 | 0 | 4,500 | 4,500 | 0 | 4,500 | 9,000 | 0 | 9,000 |
| | 5599 | Total | 0 | 0 | 0 | 4,500 | 0 | 4,500 | 4,500 | 0 | 4,500 | 9,000 | 0 | 9,000 |
| | 5999 | Component Total | 13,500 | 500 | 14,000 | 17,175 | 500 | 17,675 | 7,500 | 4,700 | 12,200 | 39,425 | 9,000 | 48,425 |
| | 9999 | Project's Total | 101,550 | 261,624 | 363,174 | 121,475 | 479,544 | 601,019 | 130,100 | 480,404 | 610,504 | 354,375 | 1,224,872 | 1,579,247 |
| | | Previous Budget | | | | | | | | | | | | |
| | | Variance | | | | | | | | | | | | |

Annex 5: MONITORING AND EVALUATION PLAN

1. *Collecting and reporting data on performance indicators*

A provisional list of Environmental State and Process Indicators is provided in the table below, which includes indication of the methods to be used and the frequency of collection of information.

| Parameter | Method and frequency of collection | Comments |
|--|--|---|
| INDICATORS OF ENVIRONMENTAL STATE | | |
| Biodiversity of mangrove forest | Formal surveys of flora and fauna to establish species diversity and numbers conducted at beginning and end of survey using recognized scientific methods. Semi-formal surveys conducted by project participants at six monthly intervals (including enumeration of indicator species). | |
| Social and economic well-being | Survey of local communities conducted at beginning and end of project using a mixture of participatory methods and questionnaires. Mid point evaluation using participatory methods to establish how participants feel the situation is changing as a result of the project. | |
| Well-being of local fishery | Records of catches by fisher folk from local communities, in co-operation with Department of Marine and Coastal Resources. | |
| Land use | Survey of areas of mangrove coverage and land uses in designated forest area. To be carried out by the Department of Marine and Coastal Resources according to their standard methodology. Annually? | Will need to differentiate between mature / young mangroves and different types of species association. |
| PROCESS INDICATORS | | |
| Community satisfaction and degree to which project meets community needs | Participatory evaluation activities with community members at the project mid-point and end. At each project event there will be a brief participatory evaluation activity to allow participants to express their views on the value of the event. Participants will choose for themselves factors, which they wish to assess. Numbers of participants at each event will also be recorded. | Quantitative assessment rather than qualitative indicators. |
| Project expenditure against budget | Quarterly financial report by project manager to project team and reporting to donor as required under terms of agreement. | Format will depend upon donor requirements. |
| Achievement of key project milestones | Quarterly progress report by project manager to project team and reporting to donor as required under terms of agreement. | Format will depend upon donor requirements. |

2. *Schedule of mid-term review, self evaluation, end-of project evaluation*

Formal independent evaluations of the project will be carried out at the mid point of the project, eighteen months after the start of the project, and at the end of the project, three months before the termination date. Both reviews will be led by, an external evaluator with experience in environmental conservation and community development. Each study will take the form of a joint evaluation by project staff and the evaluator into the management and environmental aspects of the project and an independent review of community gains and stakeholder participation by the evaluator.

3. *Description of how monitoring and evaluation activities will involve participants and stakeholders*

Monitoring and evaluation will be an integral part of the stakeholder participation element of the project. For each project activity and event, participants will carry out a simple evaluation activity, wherever possible to meet their own evaluation criteria. Stakeholders will be asked to give their perceptions of the project as part of the formal independent evaluation activities. Formal survey work will be conducted by, project stakeholders, particularly the Department of Marine and Coastal Resources (wherever possible to integrate with their own work programme and involve members of the local community) and universities and research institutes. Local volunteers will be trained in survey techniques so that they are able to lead simple community surveys on a more frequent basis.

4. *Resources that will be allocated to monitoring and evaluation*

Budgetary provision of \$US 9,000 has been allocated to the mid-term and terminal evaluations to cover consultancy fees and expenses for external evaluators. It is estimated that monitoring and evaluation (including preparation of reports required to be submitted to the UNEP/GEF/SCS Project Co-ordinating Unit on behalf of UNEP and the GEF will take between 3-4 weeks per year (on average) of the project manager's time and 3 days per year of management team time.

5. *How will monitoring and evaluation results be used in management?*

A three monthly monitoring report will be presented to the project management team by the Site Manager, who will highlight key issues for discussion at, management team meetings. As far as possible, reporting to the management team will be integrated with reporting to the UNEP as well. The Senior Advisory Group will also receive updates half yearly on key issues and the Specialised Executing Agency will provide such periodic reports to the National technical Working Group.

As part of the mid term evaluation time will be set aside to allow the management team to review progress themselves, and it is anticipated that the findings of the mid-term review will also be discussed with the donor.

Following the final evaluation, an evaluation report will be published to help the donor, participants, managers, and other interested parties such as the global mangrove network learn lessons from the project.

In order to ensure that the project is carefully monitored and that the project derives the benefit of evaluation reviews, it is essential that the project manager and the chair of the project management team have a genuine commitment to evaluation and learning. This should be a factor in selecting appropriate individuals for appointment to these posts.

Annex 6: ARRANGEMENTS FOR CO-ORDINATION AND MANAGEMENT

SITE LEVEL MANAGEMENT

The Trat demonstration site shall appoint a **Demonstration Site Manager** whose responsibility will be to report to the Focal Point for Mangroves in the SEA and to the national mangrove resource committee and through the SEA to the National Technical Working Group. The Site Manager shall be considered a full member of the NTWG.

The Demonstration Site Manager should have responsibility for managing, the activities at the demonstration site, under the direction of the **Management Board**, to be constituted by the Department of Conservation and Marine Resources.

Specifically the Demonstration Site Manager shall take responsibility for:

- Executing the work plan according to the timetable presented in Table 1 of this document taking into account any amendments that shall be agreed by the Management Board from time to time;
- Planning, and managing on a day to day basis the demonstration activities identified in the implementation plan, including preparation and supervision of annual work plan and timetables;
- Financial responsibility for the approved budget within clearly defined limits set by the management body, including keeping proper books of account and preparing financial reports for the management body;
- Responsibility for execution of the activities in accordance with the work plan and timetable and schedule of expenditures, initially defined by the demonstration site proposal and amended from time to time by the management body;
- Responsibility for acting as Secretary to the meetings of the Management Board;
- Reporting on activities and outcomes, to the management body, the focal point of the SEA, and the National Technical Focal Point according to an agreed schedule;
- Preparing inputs to the six-monthly expenditure reports, six monthly progress reports and cash advance requests to be submitted to the Project Co-ordinating Unit (PCU), through the focal point of the responsible SEA;
- Preparing and submitting to the PCU, through the focal point of the SEA, technical reports in accordance with the defined outputs of the demonstration site; and,
- Attending such national and regional meetings as shall be determined on an individual basis.

Trat Mangrove Management Board

The Trat Mangrove Management Board shall have authority and responsibility for the conduct of activities at the demonstration site. The composition of this body, its terms of reference and powers shall be clearly defined in a set of terms of reference that shall form part of the demonstration site proposal.

The Management body shall be composed of representatives of all major stakeholders having an interest in and deriving benefit from the mangrove habitats and resources within the defined limits of the demonstration site. Initially the membership shall include:

1. Specialized Executing Agency (Department of Coastal and Marine Resources)
2. Site Manager (Secretary)
3. Provincial Office of Administration
4. Office of Conservation Forest Area Management No. 2
5. Natural Resources and Environment Provincial Office
6. Chief Mangrove Resources Management No. 4
7. Chief of Mangrove Resources Research and Development No. 4
8. Director of Marine and Coastal Protection Division No. 1
9. Moh Koh Chang National Park
10. Brackish Fishery Research Station (Ao Choh)
11. Union of Ban Pred Nai Mangrove Conservation
12. Union of Ban Nam Cheio Mangrove Conservation
13. Tourist Provincial Office
14. Division of Mangrove Resources Management No. 1

Additional representatives may be added to the membership of the Board by simple decision of the Board.

The frequency of the meetings:

The Management Board shall meet no less than quarterly in Trat Province and a smaller body constituted as an Executive Committee will be created to provide oversight and advice to the Demonstration Site Manager on at least a monthly basis.

Functions:

The Management Board shall be responsible for:

- Selection of the demonstration site manager
- Review and approval of the stakeholder analysis, and financial plans regarding the generation of revenue streams;
- Development and implementation of a Business plan for the site designed to result in financial independence and sustainability following expenditure of the GEF grant funds;
- Development and implementation of a management plan for the site, which shall detail the approved uses and their levels, procedures for approval of activities at the site (including *inter alia*: issuance of permits and licences; maintenance of financial and other records; public awareness raising activities; and the methods through which control shall be exercised by the competent authorities;
- Review proposals for the harmonisation of existing legislation regarding conservation and sustainable use of marine and coastal resources, and submit to the appropriate authority for approval;
- Provide financial control and oversight of income and expenditures in accordance with the approved business plan;
- Approval of the draft programme of public awareness, education and training activities, to be conducted at the site, and clearance for publication of appropriate educational and awareness materials;
- Approval of the draft proposed programme of activities that will be provided at the site for exchange personnel over a defined time frame of between two and six months;
- Timely reporting on activities to the National Committee or Sub-committee responsible for the relevant sub-component of the project, and through the Specialised Executing Agency to the National Technical Focal Point and Focal Ministry for the UNEP/GEF South China Sea Project.
- Liaison on operational matters regarding co-ordination of actions in Thailand and Cambodia, with the Koh Kong Management Board in Cambodia, and development of a co-ordinated programme of technical consultations with their Cambodian counterparts

Senior Advisory Group

In addition to the Management Board a Senior Advisory Group shall be formed under the Provincial Governor's Office to consider and resolve issues of policy regarding the management and sustainable use of mangroves in the Trat Province.

Membership

Initially the membership shall consist of:

1. Governor, as Chairperson
2. Director General, Department of Coastal and Marine Resources
3. Director general, Office of Planning and Policy, Natural Resources
4. Director of the Tourism Authority of Thailand
5. Director General, Fisheries Department
6. Director General, Land Administration Department
7. Director, Natural Resources and Environment Office
8. Dr Sonjai Havanond, Focal Point for Mangroves
9. Dr Sanit Aksornkoae
10. Dr Nopparat Bumsingsugsa

Functions

The Primary function of the Senior Advisory Group is to provide a forum for discussion and decision regarding matters of policy affecting the sustainable use of mangroves in Trat Province and to provide a vehicle for the provision of support to the implementation of the Ministerial Declaration regarding joint actions to manage mangroves in Trat Province, Thailand and Koh Kong Province Cambodia. In discharging their latter function the Senior Advisory Group shall meet once a year with their counterparts from Cambodia to discuss matters of mutual interest, resolve any difficulties, and decide on further matters of co-operation.

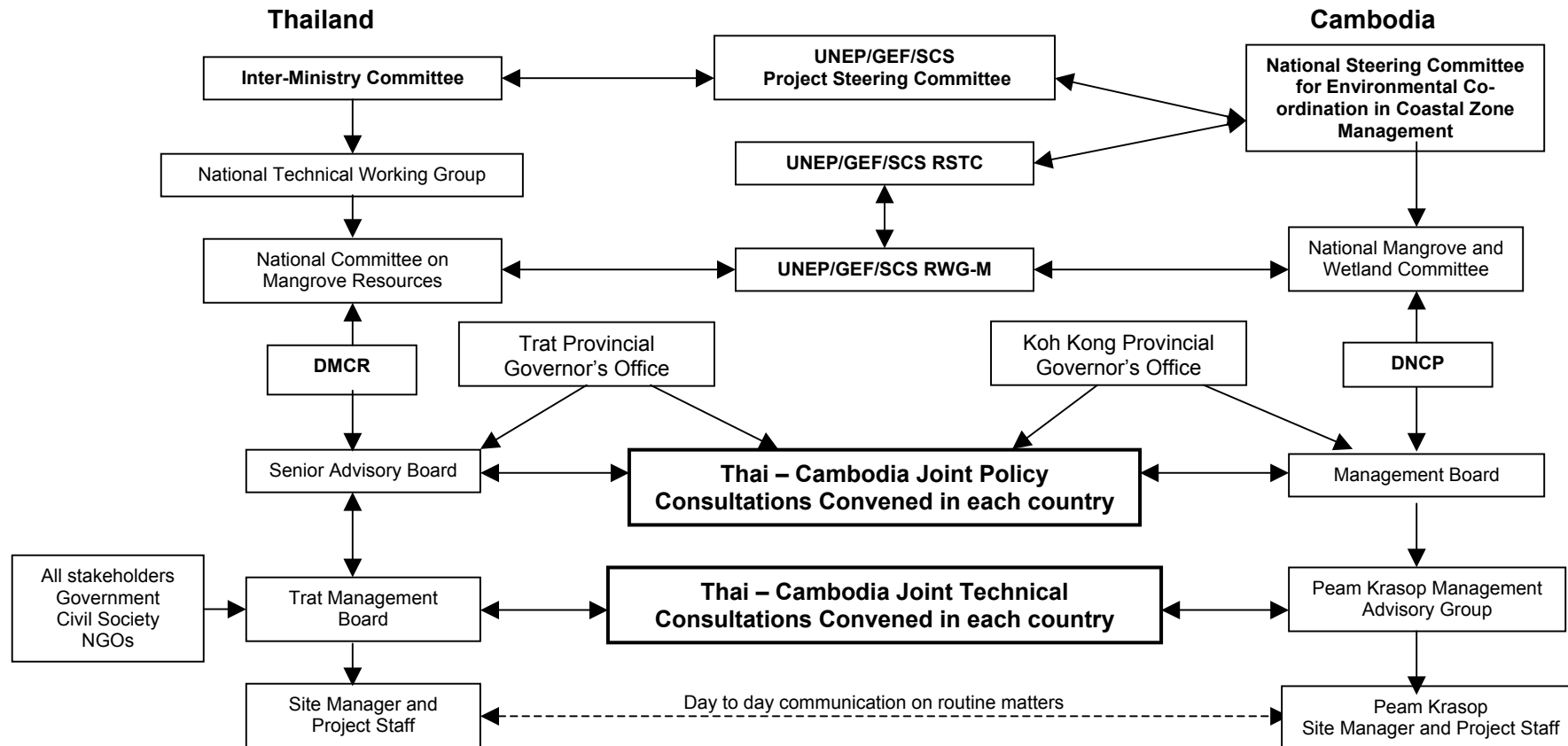
RESPONDIBILITIES OF THE SPECIALISED EXECUTING AGENCY

In addition to the tasks and responsibilities listed in the MOUs between UNEP and the Department of Conservation and Marine Resources, **the focal point of the Specialised Executing Agency** in consultation with the national committee and/or sub-committee, shall provide scientific and technical advice and guidance to the management body regarding the execution of demonstration site activities.

The Focal Point shall also be responsible for liaison:

- Between the Demonstration Site Manager and the PCU regarding dissemination of experiences, and personnel exchange between sites;
- Between the Demonstration Site Manager and the National Technical Working Group, and Regional Working Group for the sub-component concerned.

Figure 1 Co-Management Structure for joint Thai - Cambodian South China Sea Demonstration activity.



National Committee on Mangrove Resources (Thailand): Multi-stakeholder group operating at national level to co-ordinate initiatives relating to mangroves.
 DMCR: Department of Marine and Coastal Resources (Ministry of Natural Resources and Environment, Thailand).
 DNCP, Department of Nature Conservation and Protection (Ministry of Environment, Cambodia)