

DEMONSTRATION SITE SUMMARY SHEET

1. **SITE NAME AND GEOGRAPHIC CO-ORDINATES:**
Phu Quoc islands located at 9° 45' - 10° 30' N and 103° 55' - 104° 05' E in the South Western waters of Viet Nam.
2. **COUNTRY IN, WHICH THE SITE IS LOCATED:**
Kien Giang Province, Viet Nam
3. **PROVINCE IN WHICH THE SITE IS LOCATED:**
Kien Giang Province
Local government approval [yes or no]**Yes**..... if yes then date **23 September 2003**
Local government involvement [yes or no] ...**Yes**.....
Local government co-financing [yes or no] ...**Yes**....
if yes then in-kind or in-cash? **In cash and in kind**
4. **LINKAGE TO NATIONAL PRIORITIES, ACTION PLANS AND PROGRAMMES:**
 - Phu Quoc island is considered a prior site in the Biodiversity Action Plan approved by Viet Nam Prime Minister in 1995.
 - Phu Quoc Nature Reserve was established in 1993 and then in 2001 changed to Phu Quoc National Park with more investment from the Government. In the Marine Protected Network plan produced by the Ministry of Fisheries and submitted for the Prime Minister's approval, Phu Quoc was listed as a key site in the network due to its' significance in term of biodiversity, resource abundance and endangered species protection. The Phu Quoc Islands accompanied with U Minh Thuong Melaleuca forest, and Kien Luong mangroves has been proposed to be a Biosphere Reserve in the UNESCO network.
 - In the Master Plan of Phu Quoc district approved by the Government, tourism has been identified a key sector in development with plans for investment from different businesses.

The activities of the project will address the issues concerned with national priorities in the islands and be the important external support for sustainable development of the district.

Central government involvement [yes or no]: ...**Yes**.....

Central government co-financing [yes or no]: ...**Yes** if yes then in-kind or in-cash? **In kind**

5. **DATE OF NATIONAL TECHNICAL WORKING GROUP MEETING, WHICH CONSIDERED THE PROPOSAL AND RECOMMENDATION**

23 September 2003
6. **NATIONAL FOCAL POINT AND/OR NATIONAL TECHNICAL FOCAL POINT ENDORSEMENT AND/OR COMMENTS:**

Comments:

Signature:

Name & Designation: Dr, Nguyen Ngoc Sinh, General Director, NEPA, National Focal Point
Date: 15th December 2003

DEMONSTRATION SITE PROPOSAL

7. SITE DESCRIPTION [The full site description is attached as Appendix 1 to this document]

AREA:

The waters around Phu Quoc islands are characterised by large areas of coastal ecosystems. According to preliminary surveys, coral reefs occupy about 600ha, seagrass beds – more than 12,000ha and mangroves – 200ha.

ENVIRONMENT: -

Phu Quoc is an archipelago, composed of 14 islands, 120 km offshore from Rach Gia town, Kien Giang Province in the South Western waters of Viet Nam. The largest island (named Phu Quoc) covers 56,200 ha and has a relief of 603 m. The northern tip of Phu Quoc Island is 4 km to Cambodian coastline. At the southern tip of Phu Quoc are the An Thoi islands, which consist of 13 smaller islands.

The Climate of Phu Quoc is equatorial, hot and damp with distinct dry and wet seasons. The dry season occurs from December to March while the wet season is from June to August. Mean annual temperature is 26 - 27° C. Annual mean rainfall amounts to 2,000 mm. Wind direction changes seasonally with monsoon regime.

HABITAT (s):

Fringing coral reefs occur around almost all of the islands in the An Thoi area (Southern islands) and some locations around Phu Quoc, the biggest island. Patch reefs are also observed in some shallow waters far from the islands. Data collected from 12 transects in 2002 showed rather good condition of the reefs in Phu Quoc with mean coral cover ranging from high to moderate. According to the division of English et al. (1994), 25 % reefs were in good condition, 58.3 % reefs in fair condition and 16.7 % reefs in poor condition.

The shallow waters around the islands with sand, muddy sand, and gravel substrata support development of seagrass beds. Seagrass beds are found abundantly in the littoral and sub littoral of the coastal waters of northern area (from Rach tram to Ganh dau), along the eastern coastal waters (from Mui duong, Bai thom, Xa luc, Bai bon, Ham Ninh, Bai vong, Mui Chua hamlets) and the south-eastern part (An Thoi). 9 seagrass species were collected and identified including: *Enhalus acoroides*, *Halophila minor*, *Halophila ovalis*, *Thalassia hemprichii*, *Cymodocea rotundata*, *Cymodocea serrulata*, *Halodule pinifolia*, *Halodule uninervis* (wide and narrow leaved forms) and *Syringodium isoetifolium*. The large leaf and big size species such as *Enhalus acoroides*, *Cymodocea serrulata*, *Thalassia hemprichii* and *Cymodocea rotundata* are common or dominant. They often form the large seagrass meadows.

Mangroves are well developed along 4 small rivers of the biggest islands and are characteristically backed by dense *Melaleuca* forest in flat land along the coast.

These habitats support the existence of endangered species such as Dugong, hawksbill and green turtle. Phu Quoc is one of the few sites in Viet Nam where these species are observed.

PRESENT USE:

The Population of Phu Quoc district inhabits the three main islands of Phu Quoc, Hon Thom and Hon Roi. The total population recorded in 2001 was 74,000, of which some 11,130 fishermen are engaged in capture fisheries in the sea while most of the rest work in fish processing and other related occupations on the island. Rich habitats and marine living resources in the waters support the area as “a biodiversity hot spot” in Viet Nam. It is considered that fisheries and tourism play a very important role in the development of economy of the district since they have provided jobs and benefits to the society. Many primary processing factories for marine products produce a variety of marine products. Fish sauce “nuoc mam”, one such product, is produced in Phu Quoc and exported to many different countries around the world. This is a traditional industry that turns low-value fish into a profitable product through a long period of fermentation and processing with salt.

As of September 2002, the district had about 1,700 fishing vessels with the total engine power of 61,585 horsepower. Total fisheries production of the district landed in September 2002 was about 56,608 tons.

Together with Nam Du and Tho Chu islands, some large fishing grounds are found in the area, the main ones being in the south of Phu Quoc. Many commercially important reef fish such as groupers, snappers, sweet lips, emperors, parrotfish and triggerfish are caught and there is a high demand for these fish in the market. Reef dwelling genera such as the groupers *Epinephelus*, *Plectropomus*, *Cephalopholis*, snappers *Lutjanus*, sweetlips *Plectorhynchus*, emperors *Lethrinus* and monocle breams *Scolopsis* have become the favoured targets. Fishing grounds in seagrass beds provide high production of swimming crabs and *Strombus* shells.

At present, there are 8 hotels on the main island, mostly concentrating in the west coast of Phu Quoc Island and this number will increase in the next future. The development of tourism in the area will provide more jobs and benefit to the local community. Tourism can be expected to play an increasingly important role in the development strategies of the district for the next ten years. The number of tourists (mostly domestic) visiting the islands has increased dramatically during the last 7 years, from 4,543 people in 1995 to 74,997 people in 2001. The total international tourists visiting Phu Quoc in 1995 were 1,106 people, increasing to 42,748 people in 2001. The duration of stay of international visitors averaged 3 - 4 days per vacation per person while this value was higher, 3 - 5 days for domestic tourists. The total benefits to the district collected from tourism have increased from 1.5 billion in 1995 to 11 billion VND in 2001. At present, tourism in Phu Quoc has mainly focused on land while the marine environment, has not been exploited by visitors. Tourists spend their time visiting the Nature Forest Reserve in the northern part of Phu Quoc Island and swimming at some beaches such as Bai Sao and Bai Vong beaches. The island group in the southern part of Phu Quoc (An Thoi) with its' pristine coral reefs has been considered by tourist organizers during the last three years and activities such as diving, snorkelling, and fishing are to be encouraged for marine eco-tourism in the Tourism Development Plan of the district. At present, only one hotel (Sai Gon - Phu Quoc Resort) has operated a diving service. It charges 20 - 110 USD/person including resort pleasure boat, guidance, mineral water, snack, insurance, life buoy and fishing equipments.

MANAGEMENT REGIME

Phu Quoc Nature Reserve was approved by government document 194-CT in 1986 and was included in the MARD and MOSTE list of protected area in 1998. On 8 June 2001 Phu Quoc Nature Reserve was changed to a National Park under the Document 91 approved by the Prime Minister with a designated area of 31,420 ha. The National Park belongs to Kien Giang Department of Forestry Protection has been managed by a forest guard unit with 32 staff, who mostly focus on forest protection. Annual operation budget is estimated about 200 million VND per year. Most staff and managers have little knowledge of the marine environment, lack scientific training and equipment. As with all other MPAs in Viet Nam, Phu Quoc National Park has suffered from a lack of financial support and management capacity. At present, funding from the public sector each year is not enough for operating expenditures, and has been invested in reforestation and buffer zone development.

Marine resources around the islands have been managed by, Phu Quoc Department of Agriculture, Forestry and Fisheries (DAFF), belonging to Kien Giang Department of Agriculture and Rural Development (DARD). At present, DAFF has 7 staff, of whom, 3 staff are responsible for the marine component at the area and report to the Department of Fisheries (DOF) and DARD of the province. There is also support from provincial fishery protection service via activities of patrol boats in the waters around Phu Quoc Island.

In term of state management, the District People's Committee is responsible for the development of all islands. Under the support of different provincial sectors, the district receives investment for infrastructure, community development, and livelihood alternatives. Establishment and activities of big business are, however, decided by provincial authorities.

8. STAKEHOLDERS [The full plan for stakeholder involvement is attached as Appendix 2]

Phu Quoc is an island district. According to the administrative system of Viet Nam, the provincial level has deciding authority in planning and management of socio- economic activities in the district. The Provincial People's Committee (PPC) is responsible for development direction of whole province. The Department of Resources and Environment has been authorized by the PPC to act as the national focal point for the project. Other departments will play important roles during project implementation and include the Department of Fisheries, Department of Agriculture and Rural Development, Department of Trade and Tourism. The Department of Science and Technology will support the project through scientific projects funded by the provincial and central government. The province also has some enforcement capacity in the Department of Fishery Protection, Border Army and Marine Police, which will also be involved in the project following establishment of an appropriate coordinating mechanism.

The focal point in the district level is the District People's Committee with involvement of the Departments of Economy and Agriculture - Rural Development. To encourage economic activities in different sectors, the province has established some support organisations such as Fisheries and Agriculture Promotion, which receive funds from government for training, technology transfer, and experimental models designed to improve community living standard.

The most important agency for resource and environment management in the district is Phu Quoc National Park, which includes 32 staff. The Park manages 31.422 ha of land including 26.948 ha of natural forest, and 866 ha of planted forest. The buffer zone is comprised of a terrestrial area of 6,122 ha and marine zone of 22,000 ha around the biggest island. Discussions in different meetings at provincial and district levels have emphasised the very important role of the Park during project implementation and in maintaining project outputs following completion of the project. The Park receives funds from government for its permanent activities and for some kinds of projects e.g. reforestation and community development in the buffer zone.

Until recently, there are not been many big businesses in Phu Quoc and the, Sai Gon - Phu Quoc tourist resort is the biggest with some marine-based activities such as line fishing, diving and snorkelling. This company is willing to work with the project to develop eco-tourism, while an Australian business producing pearls has had good success in trade but some difficulties in maintaining water quality in the culture area due to waste discharge from the islands. The company strongly supports the project objectives and is willing to work with communities to develop pearl oyster culture. In the near future, more tourist businesses will be operated following development direction of the province. The project will involve them to enlist their support in community involvement and to avoid potentially negative impacts.

Local communities relate strongly to the resources and environment of the islands and neighbouring waters. Their activities cause numerous impacts on coastal ecosystems. In contrast, their life is adversely impacted by unsustainable use of the resources. Phu Quoc is characterized by, a large population with diverse economic activities, in which the fisheries sector is dominant. Almost all islanders will be involved in awareness enhancement. Some target communities will be included in the establishment and management of representative ecosystems at target sites. Their participation may be organized by coordination of civil society organizations such as Women's, Farmer and Youth associations.

In respect of NGOs, WWF-Indochina has implemented activities of conservation awareness enhancement in the framework of national program on turtle conservation. Wide Life at Risk with an office in Ho Chi Minh City is also looking for activities of nature conservation in the islands. International NGOs will support the project in the activities concerning with education, training and international exchange.

Resources and environment of eastern part of the Gulf of Thailand in general and Phu Quoc islands in particular have been studied by different scientific institutions such as the Institute of Oceanography, Sub-Institute of Forest Investigation and Planning, Research Institute of Fisheries Products. Research outputs, however, have not been adequate for sound planning and sustainable use of the resources and environment protection. The project will continue to involve some scientific institutions for surveying and monitoring activities.

9. THREATS [The full causal chain analysis is attached as Appendix 3]

Over fishing

Fishing boats and the total engine power of Kien Giang Province and Phu Quoc district have been increased since 1984. Although total fisheries yield of both Kien Giang province and Phu Quoc district are still on the rise, the catch per unit effort (CPUE) has declined considerably. The CPUE for Kien Giang province has dropped from 1.69 tons/hp in 1984 to 0.74 tons/hp in 1993. Information obtained through interviews with local fishermen indicates that, fisheries yield in the area at present has declined by around 50-70 % compared to that in the past 5 - 10 years. The fast growth in number of high-powered boats in the district has put heavy pressure on marine resources, especially in the shallow waters surrounding the islands. Catching endangered and critically endangered species such as dugongs and marine turtles continue to occur in the waters surrounding Phu Quoc islands. Information obtained from a dugong hunter and authorities suggest that there are at least 4–5 dugongs and some turtles caught every year.

Destructive harvesting

There are no available information relating to the use of dynamite and poisons to catch fish around the islands from managers and authorities. However, local fishermen did say that dynamiting and poisoning are still occurring in the area, by both local and outside fishermen. The hookah divers from Hon Thom often use cyanide to catch live groupers and other commercial species on coral reefs for both local consumption and international export. During the field survey in April 2002, we heard at least 2 occurrences of dynamite fishing per day occurring at the island group in the southern part of Phu Quoc. Fishing, involving the use of fluorescent lights, which attract squid and fish at night, is highly efficient and has been responsible for permanently depleting stocks in the area.

Trawling on seagrass beds is also a common occurrence and is considered to be one of the most damaging fishing activities in seagrass beds and to endangered species such as dugongs and marine turtles. Clear felling of mangroves for shrimp farming has reduced the area of mangrove forests on the island, and the loss of mangroves increased from 10 ha in 1997 to 20 ha in 2002.

Potential impacts

Pollution is considered both an existing and a potential threat to coral reefs and seagrass beds in Phu Quoc waters. Daily activities of fishing villages create a lot of solid waste and discharges to the sea. Moreover, economic activities such as fish sauce production, and fish processing, result in organic wastes with a high BOD that are discharged directly to rivers and the sea. Tourism in the area has high potential and is identified as the first priority for economic development of the district over the next ten years. Construction of infrastructure such as roads, airport, fishing ports, hotels and resorts to meet the development plan will be a major source of pollution particularly sedimentation.

Sand mining for construction by local residents has occurred at some locations on the western side of Phu Quoc Island, nearby Saigon – Phuquoc Resort. Although this activity has occurred on a small scale it has caused local erosion of the beach along the coast and perhaps this may become a more serious problem during future development.

The causal change analysis indicates the optimum points for intervention as follows:

- Management plan should be developed based on enough scientific and socio-economic baselines.
- Establishment of coordinating mechanism to integrate related stakeholders.
- Capacity building for management and enforcement.
- Awareness enhancement not only for communities but also policy makers and managers.
- Improvement of environment management in the islands to minimize negative impacts of development on coastal ecosystems.
- Increase of management effectiveness of National Park and establishment of sub-sites managed in different ways, by communities, tourist operators and other stakeholders.

10. GOALS & PURPOSE

The coastal ecosystems in the waters around Phu Quoc Island should be used sustainably in order to conserve biodiversity and to enhance local livelihoods. The project will contribute to maintaining existing biodiversity (coral reefs, seagrass beds and endangered species) in the trans-boundary waters of the Phu Quoc islands and reduce the human causes of degradation (over fishing, endangered species catching, destructive fishing). The participation of different stakeholders during project implementation will establish a mechanism to manage coastal ecosystems effectively to meet focal direction of the province in tourist development and contribute to enhancement of the living standards of local communities via sustainable fisheries and involvement in tourist activities.

11. RATIONALE AND OBJECTIVES:

The demonstration project meets the criteria of the GEF in biodiversity conservation in the transboundary waters of the Phu Quoc islands located on the border with Cambodia. Phu Quoc is also a priority site in the Viet Nam Biodiversity Action Plan approved by the Prime Minister in 1995. The waters around Phu Quoc islands are considered as the biggest fishing ground of Viet Nam. The conserved ecosystems will support sustainable fisheries in the region. Recently, the Vietnamese government has approved the development plan of the islands, in which tourism is the most important in economic activity. The terrestrial and marine ecosystems, and endangered species are assessed as having a high potential for tourism development.

Over the recent past, Phu Quoc National Park focused on forest conservation, and considered the surrounding marine area as a buffer zone for the Park, further planning and better management of this marine zone are urgently required. Central and provincial government have invested strongly in forest protection, reforestation and development of tourist infrastructure. State and private businesses have also invested in tourism and aquaculture (pearl oysters, fishes). They are willing to cooperate in order to foster an environment for sustainable investment.

As indicating in the socio-economic analysis, this is a large marine area with complicated management. The project approach comprises three levels. There is the special need for awareness, education and capacity building at the provincial level. Meanwhile, collection and acquisition of data and information for management purposes, integration mechanisms and awareness education receive more consideration at the district (islands) level. Establishment of suitable management models depending on characteristics of ecosystems and recent management will be focused at a sub-site level. The outcomes of the project will be presented clearly at the sub-site level with some areas continuing to be managed in suitable ways and maintained after the closure of the project.

Immediate objectives:

- To develop and establish a coordinating mechanism among provincial sectors and between Viet Nam and Cambodia in management of coral reefs and seagrass beds in the coastal waters of Kien Giang.
- To execute studies and monitoring activities in order to collect data and information for planning and management purposes.
- To enhance public awareness and to improve management capacity for policy makers, managers and local communities in resource conservation and environment protection.
- To improve environment management in the islands (reforestation, waste management) to minimize negative impacts on coastal ecosystems.
- To have some important sub-sites managed as pilots in favourable ways with involvement of park authorities, local fishermen, tourist sector operators and others as appropriate.
- To execute pilot activities in financial sustainability at 2 sub-demo sites.

12. OUTCOMES:

- The activities of the project will help all related departments at the provincial level, district authorities, business and communities in the islands to increase their awareness of the importance of coastal ecosystems and need to harmonize development and conservation.

- Management capacity of National Park, Department of Resource and Environment, Department of Fisheries including fishery protection, district Department of Agriculture and Rural Development will be strengthened to meet the management requirements.
- Appropriate coordinating mechanism for management of coastal resources in Phu Quoc district will be established. Information exchange and management integration with Cambodian colleagues developed.
- One hundred ha of coral reefs, 200 ha of seagrass beds carefully managed under different models. Pressure to other areas of the habitats decreased.
- Eight local people trained to do monitoring of coastal resources and environment
- At least 3 nesting beaches of marine turtle and surrounding habitats protected.
- Catching dugong in the waters around the islands, ceases.
- Tourist activities in the district directed to long-term benefits.
- Benefit for at least 2 villages improved clearly. More resources in near-shore waters for public fishing.

Monitoring activities should be started in the beginning and maintained every year to measure change of ecosystem status, endangered species observation, fishing production and other socio-economic benefit.

13. PLANNED ACTIVITIES TO ACHIEVE OUTCOMES (MONITORING AND EVALUATION PLAN AS APPENDIX 4):

Component 1. Management & Coordination

The purpose of the component is to develop a coordinating mechanism at National and Provincial level and between Viet Nam and Cambodia in the management of coral reefs and seagrass beds in the coastal transboundary waters of Kien Giang and Kampot. The target output of the component is a management plan for Kien Giang coastal waters approved by Provincial People's Committee, and co-ordinating mechanism at National and Provincial level, and co-ordinating mechanism agreed by authorities of the two countries' border provinces. Main activities compose of (1) For National Action: Formal establishment of the PSC, PMB, and National Networking; Formation of the MAG; Development of draft management plan; Formal approval of the management plan at the Provincial level; development of coordinating mechanism at National level approved by IMC; (2) For Joint Action: Organizing joint meeting between PMB/MAG of Viet Nam and Cambodia; and Development of policy and co-operation framework for transboundary waters. Project management including maintenance of project operations, auditing, and monitoring and evaluation are included in this component.

Component 2. Survey and Monitoring

The survey and monitoring activities carried out in order to collect data and information for planning and management purposes as well as for assessment of outcomes of the project. This component will be fulfilled by Institute of Oceanography in Nha Trang and Hai Phong with support from SEA START RC for database and mapping. While the surveys on using resources and market-based economic values for the whole area will be carried out by DoF & SM. Implemented activities, such as: Surveys on biodiversity and resources of coral reefs and seagrass beds; Survey on resource use and market-based economic values; Establishing monitoring methodology for coral reefs and seagrass bed environmental state; Annual monitoring activities of coral reefs and seagrass beds sub-demo site.

Component 3. Training and Education

Public awareness and education are considered key to improve knowledge regarding the importance of coastal ecosystems and sustainable use for policy makers, managers, private sector and local communities. This component also emphasises capacity building to support functional agencies and enhance effectiveness in resource conservation and environment protection. The activities, to be implemented include development and dissemination of training materials for public awareness; seminars for awareness enhancement for managers and policy makers; study tours; training professional skills in project management, ecological monitoring.

Component 4. Environment Management/ Improvement

Coastal habitats and their resources are suffering threats from wastes and discharges from human land-based and marine-based activities. This component includes activities to improve environment quality in the islands via reforestation, waste management and enhancement of fishermen's

knowledge regarding to the relation between economic benefit and environment protection. This is also a big concern of the provincial authorities, which plan to develop a training programme for local fishermen in the islands. In the framework of the project, a series of meetings involving wide participation for familiarisation with the project, providing information on environmental impacts and regulations regarding waste management and pollution threats to coral reef & seagrass habitats will be conducted. Phu Quoc National Park will enforce reforestation with Government co-funding. Department of Fisheries also plans to organize training courses on environment legal documents and responsibilities of fishermen, especially fishing boat captains in environment protection.

Component 5. Sub Demo site

This component will address threats at the small scale in which local stakeholders will be involved to manage effectively their resources and use them for enhanced living standards based on sustainable economic activities. The sites will be managed by, park authorities, local fishermen or tourist sector operators depending on the location and resource potential. Based on ecological and socio-economic conditions, management plans for sub-demo sites will be developed for specific coral reefs and seagrass beds. Participatory process will be applied to involve all relevant local stakeholders in activities. Detailed surveys of coral reefs and seagrass beds will be carried out for zoning & regulation preparation; enforcement & surveillance will involve the local community; guideline for sustainable uses (fishing, tourism) and awareness raising will be developed; and a rehabilitation trial of coral reefs seagrass beds will be implemented in appropriate sub-demo sites.

Component 6. Pilot activities for financial sustainability at sub-demo site

This component will execute pilot activities aimed at enhancing prospects of financial sustainability at 2 sub-demo sites with participation of the Provincial Department of Finance. The activities include: analysis of present and potential uses; economic values and market price; net come and production costs; identification of present and potential threats; establishment of management frameworks; and establishment of financial management mechanisms now and future.

14. SUSTAINABILITY ANALYSIS AND RISK ASSESSMENT

To maintain the outputs of the project, it is very important to establish a mechanism to integrate all related sector and stakeholders. The role of the PPC, in coordination of all activities in the islands, will reduce current problems resulting from sectoral approaches to management. The PPC also has authority to allocate land and water tenure for sustainable use. The project aims to build capacity to improve long-term management of related sectors. There are three solutions to ensure financial sustainability: Phu Quoc National Park will use some permanent budgets for coastal ecosystem management in the area belonging to the park authorities; management models of ecosystems based on sustainable tourism will use recovery cost from benefits derived by tourist sector operators; and some communities will be encouraged to manage their resources for long-term exploitation following the support from project and fisheries promotion to enhance benefit via reasonable use, aquaculture and resource recovery. Recently, the establishment of environment funds has been implemented in different provinces of Viet Nam. The project will support Phu Quoc district to develop the mechanism for such a fund, which will be used for maintaining activities in environment protection in the islands.

The first risk to the project is a change in development plan of island district. Phu Quoc is on the way of strong development with high priority of the government. Economic concerns may compromise conservation purposes during and after the project. To avoid this influence, the project should study carefully the execution of the development plan and indicate options to harmonize the relation between conservation and development. The outputs of the project should also be approved by the PPC to formalize mechanisms to prevent impacts from economic activities after the project.

The second risk relates to lack of funding for conservation because of low benefits and inputs in management models of ecosystems after the project. During implementation, it is essential to provide communities with information and technique for livelihood alternatives and to seek to diversify income sources of local communities. Civil society organizations will play an important role in working with fisheries promotion and banks to maintain long-term activities of fishermen and the private sector.

Coastal ecosystems in Phu Quoc may be impacted by natural catastrophes such as typhoon. High density of fishing boats and ships may cause environment risk (oil spill, pollution). Zoning for conservation should consider these potential impacts. The project should also encourage policy makers and planners to select options that minimize negative impacts.

15. ESTIMATED BUDGET (IN US\$): [SEE DETAILS IN APPENDIX V]

15.1 SUMMARY BUDGET BY ACTIVITIES (Details described in Appendix 5.1)

Total estimated budget of the demonstration site project for Vietnamese side is 734,090 \$US, including:

- GEF funding: 365,000 \$US
- Government co-funding in-kind: 145,570 \$US
- Government Co-funding in cash: 223,520 \$US

Sub-component or Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In cash	In kind	
1.1 Management and Coordination / National Action		99,310		68,160	167,470
1.2 Management and Coordination / Joint Action		19,570		18,150	37,720
2.1 Surveys on biodiversity and resources		80,915		10,425	91,340
2.2 Development of GIS database done by SEA START RC		2,000		2,000	4,000
3.1 Development of training materials for public awareness		4,500		3,500	8,000
3.2 Seminars for awareness enhancement		6,750		1,150	7,900
3.3 Study tours		13,800		500	14,300
3.4 Training professional skills		12,070		5,250	17,320
4.1 Meetings for familiarisation with the project, knowledge on environmental impacts and regulations regarding on waste management from human activities to conserve coral reef and seagrass habitats		6,420	12,020		18,440
4.2 Reforestation			129,000		129,000
4.3 Training on environment protection for crews, especially for fishing boat captains			75,000		75,000
5.1 Management plan of sub demo site for coral reefs involving local stakeholders		58,640	4,340	17,490	80,470
5.2 Management plan of sub demo site for seagrass beds involving local stakeholders		53,385	3,160	17,625	74,170
6. Pilot activities for financial sustainability at the sub-demo site		7,640		1,320	8,960
Grant Total		365,000	223,520	145,570	734,090

15.2 SUMMARY BUDGET BY OBJECTS OF EXPENDITURE (Details described in Appendix 4.2, 4.3)

Object of expenditure	Budget (in \$US)	GEF	Co-funding		Total
			In cash	In kind	
1000 Project Personal Component		44,875		30,535	75,410
1100 Project Personnel		21,450		21,450	42,900
1200 Consultant		6,250		6,610	12,860
1300 Administration support		2,475		2,475	4,950
1600 Travel on office business		14,700			14,700
2000 Sub-Contract Component		182,855	133,500	49,985	366,340
2200 Sub-Contract Component		182,855	133,500	49,985	366,340
3000 Training Component		79,520	57,020	50,250	186,790
3200 Group Training		44,020	45,000	12,300	101,320
3300 Meeting / Conference		35,500	12,020	37,950	85,470
4000 Equipment Component		26,980		9,300	36,280
4100 Expendable Equipment		3,300		3,300	6,600
4200 Non Expendable Equipment		5,500			5,500
4300 Premises		18,180		6,000	24,180
5000 Miscellaneous Component		30,770	33,000	5,500	69,270
5200 Reporting Costs		24,170	33,000	5,500	62,670
5300 Sundry		6,600			6,600
Grand total		365,000	223,520	145,570	734,090

16. IMPLEMENTATION PLAN

Activities	Quarter	Year 2005			Year 2006				Year 2007			
		2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
1.1 National Action												
1.1.1 Formal establishment of the PMB by the PPC and annual meetings of PSC												
1.1.2 Operation of PMB												
1.1.3 Formation of the MAG and annual meetings of MAG												
1.1.4 Maintenance of the project office												
1.1.5 Project management (Auditing, Monitoring and Evaluation)												
1.1.6 Development of draft management plan												
1.1.7 Review of draft of management plan by local/district stakeholders												
1.1.8 Revision of draft and submission to the PMB for review and approval												
1.1.9 Formal approval of the management plan at the Provincial level												
1.1.10 Publication of maps, guideline, management plan.												
1.2 Joint Action												
1.2.1 Joint meeting both PMB/MAG of VN/CPC												
1.2.2 Development of policy and cooperation framework for project area												
2.1 Surveys on biodiversity and resources												
2.1.1 Surveys on biodiversity and resources of CR												
2.1.2 Surveys on biodiversity and resources of SG												
2.1.3 Survey on resource use and market-based economic values - entire area												
2.1.4 Establishing monitoring methodology for coral reefs environmental state												
2.1.5 Establishing monitoring methodology for seagrass bed environmental state												
2.1.6 Annual monitoring activities of coral reef sub-demo site												
2.1.7 Annual monitoring activities for seagrass sub-demo site												
2.2 Development of GIS database done by SEA START RC												
2.2.1 CR&SGFPs send existing data to SEA START RC												
2.2.2 SEA START RC prepares draft site map												
2.2.3 Standardization of the map, coding, layers, colour												
2.2.4 Satellite interpretation by SEA START RC												
2.2.5 Ground truthing by site managers and SEAs												
2.2.6 Expansion GIS database for management purpose												
3.1 Development of training materials for public awareness												
3.1.1 Poster 100 copies												
3.1.2 Video Film (1 original and 100 copies)												
3.1.3 Leaflets 1,000 copies												

Activities	Year 2005			Year 2006				Year 2007				
	Quarter	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
3.2 Seminars for awareness enhancement												
3.2.1 Biodiversity & sustainable development for Policy makers												
3.2.2 Biodiversity and sustainable use for managers at the district level												
3.3 Study tours												
3.3.1 Study tours Apo (Philippines), Hon Mun & Con Dao National Park for CR												
3.3.2 Study tours to Trikora (Indonesia) for seagrass component												
3.4 Training professional skills												
3.4.1 Training on management project and professional skill for CR and SG												
3.4.2 Training on English Foreign Language												
3.4.3 Financial management training for sub-demo site community												
4.1 Meetings for familiarisation with the project, environmental impacts and regulations regarding on waste disposal from tourist facilities and importance of CR&SG habitats												
4.1.1 Meetings for provincial authorities and private sectors for familiarisation with the project,...												
4.1.2 Meetings for districtial authorities and fishermen for enhancement of environment protection...												
4.2 Reforestation												
4.2.1 Reforestation by National park of Phuquoc												
4.3 Training in environment management for crews, especially for fishing boat captains												
4.3.1 Training for crews, especially for fishing boat captains on the environment regulation and laws of central/local governments and fishermen's duties and responsibilities.												
4.3.2 Printing leaflets, poster, brochures, handbooks												
5.1 Management plan of sub demo site for CR involving local stakeholders												
5.1.1 Management plan of sub demo site for CR involving local community, stakeholders												
5.1.2 CR biophysical surveys in detail for zoning & regulation preparation												
5.1.3 Discussion review and agreement of zoning plan by stakeholders												
5.1.4 Approval of zoning plan by the appropriate authorities												
5.1.5 Zoning/demarcation (buoy setting)												
5.1.6 Participatory preparation of regulations regarding agreed uses within coral reef zones												
5.1.7 Enforcement & surveillance with involvement of local community (patrol, allowance, boat,...)												
5.1.8 Guideline for sustainable uses (fishing, tourism), fisheries promotion and awareness raising												
5.1.9 Rehabilitation trial of coral reefs at a damaged reef at An Thoi island												

Activities	Year 2005			Year 2006				Year 2007				
	Quarter	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
5.2 Management plan of sub demo site for seagrass beds involving local stakeholders												
5.2.1 Management plan of sub demo site for seagrass involving local community, stakeholders												
5.2.2 Seagrass biophysical surveys in details for zoning & regulation preparation												
5.2.3 Discussion review and agreement of zoning plan by stakeholders												
5.2.4 Approval of zoning plan by the appropriate authorities												
5.2.5 Zoning/demarcation (buoy setting)												
5.2.6 Participatory preparation of regulations regarding agreed uses within seagrass zones												
5.2.7 Enforcement & surveillance with involvement of local community (patrol, allowance, boat,...)												
5.2.8 Guideline for sustainable uses (fishing, tourism), fisheries promotion and awareness raising												
5.2.9 Rehabilitation trial of seagrass at a damaged area (1,000 m2) in Ham Ninh												
6.1 Analysis of present uses, value, net come and costs												
6.1.1 Site level social-economic evaluation including net sales value and costs of production												
6.1.2 Provincial level net income existing revenue, (resource and other taxes)												
6.1.3 Management costs (government agencies costs)												
6.2 Analysis of potential future uses, value, net come and costs												
6.2.1 Identification of alternative products/uses/livelihood possibilities												
6.2.2 Development of appropriate business plans for new products/uses												
6.3 Identification of present threats and potential threats												
6.3.1 Identification of present and potential threats resulting from alternative new uses												
6.4 Establishment of financial management frameworks												
6.4.1 Establishment of formal Site/location based stakeholder management groups												
6.4.2 Provision of advice as required												
6.5 Establishment of financial management mechanisms												
6.5.1 Agreement and implementation of revenue collection procedures												
6.5.2 Agreement of disbursement procedures and financial controls												
6.5.3 Establishment of micro-financing funds and loan procedures												

17. PROPOSED MANAGEMENT OF THE ACTIVITIES: [SEE Appendix 6 of Arrangements for co-ordination and management]

The Viet Nam Focal Ministry in the framework of UNEP/GEF/SCS project is the Ministry of Natural Resources and Environment, with the Viet Nam Environment Protection Agency as the coordinating unit. The demonstration site project will be implemented by the Department of Natural Resources and Environment (DoNRE) under authorization of Kien Giang Provincial People's Committee (PPC). The Institute of Oceanography in Nha Trang and Hai Phong as the Specialized Executing Agencies (SEAs) for the coral reef and seagrass sub-components will be the co-ordinating body to develop working relationships at regional, national, provincial and site levels. The project will be separated into three components with responsibilities assigned to different sectors: survey and assessment – scientific institutions; awareness and capacity building – NGOs; management – authorized provincial departments. A Project Steering Committee (PSC) has been established under the leadership of the PPC and supported by a Management Advisory Group (MAG) with participation of experts on legal, economic, ecology, tourism and related fields. The Project Management Board (MAB) includes leaders and staff of DoNRE and the Site Manager.

The Phu Quoc demonstration site is part of the regional network of demonstration sites having strong linkage with other sites, especially those in Cambodia and Thailand. The channels for information and expert and staff exchange have been established among the demonstration sites of the UNEP/GEF South China Sea project and involve the Regional Working Groups on coral reef and seagrass and the regional Scientific and Technical Committee. Phu Quoc is also a member of the Viet Nam National Park and Nature Reserve system and linkage with other Vietnamese sites will encourage effective conservation at the national level.

18. INFORMATION ON PROPOSED EXECUTING AGENCIES:

1. Kien Giang DoNRE (Implementing agency)

Functions

DoNRE is a specialized agency belongs to the PPC of Kien Giang Province having responsibility to assist the PPC in implementing the state management of soil, water, and mineral resources, the environment, meteorology hydrology, geodesy and mapping in provincial territories. The DoNRE is under the direct guidance of PPC, concurrently under the technical, professional guidance of the Ministry of Natural Resources and Environment. The headquarters are located at 1226A, Nguyen Trung Truc St. Rach Gia town, Kien Giang province.

Responsibilities and authorities

Submit to the PPC in promulgating decisions, instructions about managing soil resources, water resources, mineral resources, environment, meteorology hydrology, geodesic and mapping (commonly called Natural Resources and Environment [NRD]) at the locality according to the governmental power allotment. Submit to PPC planning development, long-term plan, 5-year, and annual about NRD suitable to local social-economic overall development plan. Submit to PPC draft decisions regarding local NRD protection measures; direction and control of the implementation. Organize, and direct the implementation of documents relating to legal regulations, programs, planning, plans after approval; make propaganda, publication, education about laws and information of NRD.

Specific functions regarding to Environment Management, DoNRE responsible to:

Submit to the PPC to issue, recuperate environmental standard meeting certificates from production units, trade and service in the provincial territory at assigned levels; organize and establish reporting on environmental status, create and strengthen potential of observation sites and analyse environment, monitor local environmental quality according to ministerial instructions of NRE; consider and decide environmental action evaluation report of projects, bases at assigned levels; and collect fees for environment protection according to legal regulations.

2. Institute of Oceanography (Specialized Executing Agency for Viet Nam Seagrass and Coral Reefs)

The Institute of Oceanography was established in 1922 with headquarter in Nha Trang and two offices in Hai Phong and Ha Noi. The institute has over 200 staff from various fields including research, support and administrative personnel. The Institute of Oceanography is under the Vietnamese Academy of Natural Science and Technology (VAST). Core funding is received from the VAST for the operation of specific directed research activities. In addition, the institute has been granted permission to undertake other specific commissioned research and educational activities.

The institute was instrumental in the initiation the MPA system in Viet Nam and in the development of a comprehensive proposal for a large Danida Program to support the establishment of a series of MPAs along the entire length of the coast of Viet Nam. The institute has also provided inputs on the establishment, biodiversity analysis and provision of management recommendations to the two other protected areas that comprise substantial marine areas including coral reefs. These sites are in Ninh Thuan Province and in Con Dao National Park in the south of the country.

In addition, it plays pivotal role in the following global networks:

- *Global Coral Reef Monitoring Network* - IO is the national coordinator for this scientific program seeking to monitor the condition of human activities on coral reefs throughout the world.
- *Reefcheck*: IO provides training and coordination of *Reefcheck* a coral reef monitoring system used by divers and interested parties in monitoring reef health.
- The Vietnamese inputs for the *International Coral Reef Initiative* and *Action Network* projects are being coordinated by IO

The IO has undertaken research and consulting activities for clients including UNEP, ICLARM, WWF, FAO and has been supported by over 10 different national government departments that recognize the importance of the Institute's work. In addition, the education activities of the IO attract over 100,000 visitors to the Institute on an annual basis. The IO was authorized by Ministry of Education and Training for Ph.D education on hydrobiology and ichthyology.

As a government institution, these activities, which are legally and financially autonomous from government research grants, are subject to annual government audit to ensure that funds are handled in a clear and transparent manner. In this sense the Institute is commercially accountable for any agreement that they enter into.

19. EXECUTING AGENCY CONTACT PERSONS:

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SITE CHARACTERISATION

1. Geographic Location

Phu Quoc is an archipelago, comprised of 14 islands 120 km offshore from Rach Gia town, Kien Giang Province and is located at 9° 45' - 10° 30' N and 103° 55' - 104° 05' E in the south western waters of Viet Nam. The largest island (Phu Quoc) covers 56,200 ha and has a relief of 603 m. The northern tip of Phu Quoc Island is only some four kilometres from Cambodian coastline. At the southern tip of Phu Quoc Island is the An Thoi group consisting of 13 islands.

2. Transect Sites

In 1994, WWF and the Institute of Oceanography conducted a survey of biodiversity, resource utilization and conservation potential of the An Thoi islands. The survey was carried out at 12 reefs using Line Intercept Transect method (English *et al* 1994). The results from this study and further surveys with support from the National Center of Natural Science and Technology (recently Vietnamese Academy of Natural Science) proposed Phu Quoc islands as a Marine Protected Area (MPA) within 15 proposed MPAs in Viet Nam which designed by Ministries of Fisheries and Natural Resources and Environment. Coral reef monitoring based on the ReefCheck technique has been implemented at 6 sites since 2001. Recent projects on the conservation of endangered species and their habitats, provides updated information and data related to marine resources and their status.

3. Physical Features

3.1 Climate

The climate at Phu Quoc is equatorial, hot and damp with distinct dry and wet seasons. Main dry season occurs from December to March while the wet season is from June to August. Mean annual temperature is 26 - 27° C. Annual mean rainfall amounts to 2,000 mm. Wind direction changes seasonally: in February it is predominantly north-eastern and in July and August south-western.

3.2 Hydrology

Sea surface temperatures range from 24 to 30° C, usually peak in May-August and lowest from November to February. Mean annually salinity varies from 32 to 34 ppt. Tidal regime of the area is characterized by diurnal cycles, reaching height of 0.8 m at high tide.

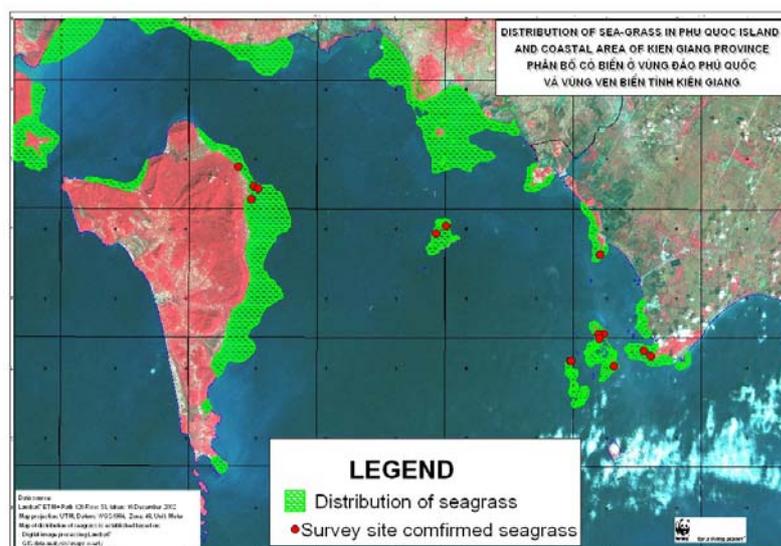


Figure 1. Map of transboundary coastal waters showing location of Phu Quoc islands and seagrass distribution obtained by Remote Sensing application (source: WWF Indochina)

3.3 Hydrodynamics

Currents in the Gulf of Thailand are circular (Pham Hoang Ho 1985) and under the seasonal influence of the monsoons. During the northeast monsoon, the current flows clockwise, anti-clockwise in the southwest monsoon. Current speed in the two monsoons is generally less than 30 cm/s and wave direction is influenced by prevalent wind. Wave height is generally less than 0.9 m.

3.4 Reef area and reef structure

The morphology and profile of coral reefs in Phu Quoc waters varies considerably. The 20 m bathymetric contour runs along the western shoreline of the islands while the eastern parts of most islands are steep hills. The bottom topography in the southern island group is irregular with a very deep strait (60 m) between Phu Quoc and Hon Dua Island. On the western sides, native rock blocks are found on the sea bottom to a depth of 5-7 m beyond which are gentle slopes often of gravel, coral debris, littoral materials and occasionally muddy sand.

Coral reef communities occur in patches around most of the islands in An Thoi area and some locations around Phu Quoc, the biggest island. The corals grow directly on native rock bed stretching from the islands. Fringing coral reefs mainly occur on the west and southwestern part of Phu Quoc and most of the smaller islets. In general the structure of the reefs in this area can be divided into three different zones:

- Zone 1: Shallow zone is composed of native rock blocks, which extend from the islands down to a depth of 2 - 3 m. Colonies of *Acropora* and *Porites* are scattered on the rock block.
- Zone 2: Middle zone is wide area from 3 - 10 m depth. This zone is high in coral cover and biodiversity. *Acropora* is mainly found in this zone at depths of 3.5 - 4.5 m.
- Zone 3: This is a sandy, muddy-sandy or gravel-sandy zone extending from zone 2 at the end of coral rich zone. Topography is gentle and smooth.

Based on the scale and distribution of coral reefs around the islands, the area of coral reefs can be roughly estimated ca. 600 ha.

3.5 Seagrass bed distribution

The shallow waters around the islands with sand, muddy sand, gravel substrata support development of extensive seagrass beds. Seagrass beds are found abundantly in the littoral and sub littoral of the coastal waters of the northern area (from Rach tram to Ganh dau), along the eastern coastal waters (from Mui duong, Bai thom, Xa luc, Bai bon, Ham Ninh, Bai vong, Mui Chua hamlets) and the south-eastern part (An thoi). The total area of seagrass beds is estimated about 13,000ha.

4. Noteworthy Fauna and Flora

4.1 Corals

The area supports 89 species in 37 genera of scleractinian corals, 1 Hydrozoan and 19 soft and gorgonian corals (WWF 1994). Several species are yet to be confirmed and may be new records to the list of corals in Viet Nam. *Acropora*, *Montipora*, *Porites* and *Pavona* are the dominant genera at most sites (Table 1).

Table 1 Sites with some dominant genera of corals, Phu Quoc islands.

Site name	Coral species
1. Hon Roi	<i>Porites</i> , <i>Acropora</i> , <i>Montipora</i> , <i>Fungia</i>
2. Hon Dam Ngang	<i>Porites</i> , <i>Pavona</i> , <i>Montipora</i> , <i>Fungia</i>
3. Hon Mong Tay	<i>Porites</i> , <i>Pavona</i> , <i>Montipora</i> , <i>Pocillopora</i>
4. Hon Dam	<i>Acropora</i> , <i>Porites</i> , <i>Montipora</i>
5. S. Hon Vong	<i>Acropora</i> , <i>Montipora</i> , <i>Pavona</i> , <i>Porites</i>
6. N.W. Hon Vong	<i>Porites</i> , <i>Pavona</i> , <i>Acropora</i> , <i>Montipora</i>
7. Hon Vang	<i>Porites</i> , <i>Montipora</i> , <i>Pocillopora</i> , <i>Acropora</i>
8. Hon May Rut	<i>Sinularia</i> , <i>Acropora</i> , <i>Sarcophytum</i> , <i>Pocillopora</i>
9. Hon Dua	<i>Turbinaria</i> , <i>Porites</i> , <i>Montipora</i> , <i>Sarcophytum</i>
10. N.W. Hon Thom	<i>Porites</i> , <i>Acropora</i> , <i>Turbinaria</i> , <i>Montipora</i>
11. Hon Gam Gi	<i>Porites</i> , <i>Sarcophytum</i> , <i>Acropora</i> , <i>Pavona</i>
12. N.W. Bai Thom	<i>Porites</i> , <i>Acropora</i> , <i>Montipora</i> , <i>Fungia</i>

Hard coral diversity index calculated in genera level at 12 study sites ranged from 0.59 to 1.19, giving mean value of 0.82 ± 0.17 . Live coral cover for all species at 6 study reefs conducted in 2002 ranged from 28.7 (Hon Roi) to 52.5 % (Hon Mong Tay), giving mean value of 42.2 ± 8.6 %. Soft coral cover was not recorded on the transects at studied sites. In general, condition of the reefs in Phu Quoc Island is still not bad with mean coral cover ranging from fair to good.

Comparisons of the results for individual reefs in 2002 with those of previous survey in 1994 indicate that although some reefs have remained in good condition, others have deteriorated (Table 2). The trend of change in coral cover for all species between 1994 and 2002 at 5 reefs was minus 3.3 %. This indicates a very little changes in coral cover on the reefs of the area.

4.2 Seagrasses

Based on the results of 3 investigations in November 2000, April 2002, and July 2002 along the coastal waters of Phu Quoc Island, 9 seagrass species were collected and identified including: *Enhalus acoroides*, *Halophila minor*, *Halophila ovalis*, *Thalassia hemprichii*, *Cymodocea rotundata*, *Cymodocea serrulata*, *Halodule pinifolia*, *Halodule uninervis* (wide leaves and narrow leaves form) and *Syringodium isoetifolium*. The large leafed and big size species such as *Enhalus acoroides*, *Cymodocea serrulata*, *Thalassia hemprichii* and *Cymodocea rotundata* are common or dominant often forming large mono-specific seagrass meadows.

4.3 Algae

A total of 98 species in 51 genera of marine algae have been recorded in the waters of Phu Quoc islands. The dominant phyla were Rhodophyta (62 species) and Chlorophyta (16 species). The Phaeophytes *Turbinaria decurrens*, *T. furcigera*, the Rhodophytes *Gelidium pusillum*, *Ceramium gracillium*, the Cyanophyte *Lyngbya martensiana* and coralline algae *Amphiroa fragillissima*, *Jania unguolata f. brevior*, *Lithophyllum samoense* were most common. Numbers of species of algae per site varied widely from 8 (Hon Mong Tay) to 49 species (Bai Thom), giving mean value of 29 ± 11.6 species/site.

Present algal cover in 2002 at 6 study sites following Reefcheck method averaged 1.14 ± 3.78 %, ranging from 0.0 to 13.13 %. The highest percentage (13.13 %) of fleshy seaweed cover was recorded on the shallow transect at Hon Dam island whereas this value at the other sites were recorded near to zero.

Table 2 Comparison of live coral cover on contour and vertical transects from 2002 with WWF 1994 at Phu Quoc waters. +ve indicates an increase in live coral cover from 1994 - 2002; -ve indicates a decline in cover. s indicates shallow transect and d indicates deep transect.

Site name Method	1994		2002	Trend of change
	Vertical transect	Contour transect (s: shallow, d: deep transect)		
Hon Roi	48.0 %	s: 41.6 %	s: 21.7 %	-ve
		d: 60.8 %	d: 36.3 %	
Hon Dam Ngang	34.2 %	s: 9.0 %	s: 63.7 %	+ve
		d: 23.2 %	d: 30.6 %	
m	26.0 %	s: 34.2 %	s: 29.4 %	No change
		d: 46.2 %	d: 55.0 %	
Hon Vong	66.9 %	s: 82.6 %	s: 45.0 %	-ve
		d: 60.6 %	d: 37.5 %	
Hon Mong Tay	28.4 %	s: 68.0 %	s: 59.4 %	-ve
		d: 71.2 %	d: 45.6 %	
Average/site	40.7 ± 15.1	45.7 ± 26.2	42.4 ± 13.1	Slight change

Table 3 Density and biomass of seagrasses in the main beds in Phu Quoc waters.

Species	Location	Density (three/m ²)	Dry biomass (g/m ²)	Cover category (%)
<i>Thalassia hemprichii</i>	Bai Dai	450	38,25	4 (51- 75%)
<i>Thalassia hemprichii</i>	North Bai Vong	640	75,52	5 (76- 100%)
<i>Thalassia hemprichii</i>	An Thoi	570	66,23	4 (51- 75%)
<i>Cymodocea serrulata</i>	Bai Dai	340	20,40	4 (51- 75%)
<i>Cymodocea serrulata</i>	Bai Thom	576	67,97	5 (76- 100%)
<i>Cymodocea serrulata</i>	North Bai Vong	880	124,94	5 (76- 100%)
<i>Cymodocea serrulata</i>	An Thoi	430	27,61	4 (51- 75%)
<i>Cymodocea rotundata</i>	An Thoi	1.350	83,70	5 (76- 100%)
<i>Enhalus acoroides</i>	Bai Dam	90	216	4 (51- 75%)

4.4 Molluscs

Up to present, some 132 species in 83 genera from 35 families of reef-associated macro-molluscs were recorded in Phu Quoc waters. *Trochus maculatus* was the most common species and occurred at almost all reef sites. *Cypraea arabica*, *Arca ventricosa*, *Pinctada ducalis*, *Tridacna squamosa* were also found commonly on the reefs.

Density of mollusc indicator species recorded at 6 study reefs in 2002 following Reefcheck method, including *Tridacna*, *Trochus* and triton shell *Charonia*, ranged from 0.0 to 7.5 individuals, giving mean value of 3.4 ± 2.6 individuals per 400 m². Of these, *Tridacna* and *Trochus* were the main contributors to the total density of this group. *Trochus niloticus* and *Trochus maculatus* were found with high number (7 individuals per 400 m²) at Hon Dam Ngang, Hon Dam. *Tridacna squamosa* was best represented at Hon Roi and Hon Thom, with mean density being 2 - 4 individuals per 400 m². This mean value shows a very low number of mollusc remaining on reefs in this area compared to that in Con Dao, but still higher than the other areas in coastal waters of Viet Nam such as Nha Trang, Ninh Thuan.

4.5 Crustaceans

This group has received less consideration during previous surveys. According to the list of major species exploited in Kien Giang Province, there are 9 species in 4 genera of crustaceans recorded at Phu Quoc islands. Among them, 4 species of lobsters including *Panulirus ornatus*, *P. homarus*, *P. longipes* and *P. versicolor* are commercially important species. Data collected in 2002 showed that no lobsters were recorded on 12 transects at 6 sites. This suggests that commercial species of lobster are over-exploited in this area. Banded coral shrimp *Stenopus hispidus* was also not recorded at all sites although they are not collected for food.

4.6 Echinoderms

This group has also received less consideration in the recent studies. A total of 32 species in 23 genera of 15 families of echinoderms were recorded during the former Soviet-Vietnamese joint expedition conducted in 1985 (Dao Tan Ho 1992). Of these, the family *Holothuriidae* was the most abundant (7 species). Crown-of-thorn sea star *Acanthaster planci* was not recorded on the transects at 6 sites in the present survey 2002. However this species was found on some reefs such as Hon Vong and Hon Dam.

Density of echinoderms following reefcheck indicators ranged from 116 (Hon Dam) to 582 individuals per 400 m² (Hon Vong), giving a mean value of 396 ± 199.3 individuals per 400 m², of which the sea urchin *Diadema* contributed a very high percentage. Density *Diadema* at 6 reefs averaged 396 individuals per 400 m², ranging from 115 (Hon Dam) to 580 individuals per 400 m² (Hon Vong). Edible sea cucumbers were absent at all reefs.

4.7 Coral reef fish

Some 135 species of reef-associated fishes, in 60 genera from 27 families, were recorded at Phu Quoc islands (Nguyen Huu Phung & Nguyen Van Long 1996). The families Labridae (28 species) and Pomacentridae (24 species) were both well represented. Some commercial species of Serranidae (14 species), Scaridae (13), Lutjanidae (5), Nemipteridae (5) and Siganidae (5) were common on the

reefs in the area. Butterflyfish, Chaetodontidae were not common and only 3 species of butterflyfish, *Chaetodon octofasciatus*, *Chelmon rostratus* and *Heniochus acuminatus* are recorded from Phu Quoc. Mean density of butterflyfishes at 6 study sites ranged from 15 to 61 individuals, giving rise to average density of 45 ± 10.6 individuals per 500 m^2 . Some common species include *Labroides dimidiatus*, *Halichoeres marginatus* (Labridae), *Abudefduf sexfasciatus*, *Hemiglyphidodon plagiometopon*, (Pomacentridae), *Cheilodipterus quinquelineata* (Apogonidae), *Caesio teres* (Caesionidae), *Lutjanus decussatus* (Lutjanidae), and *Scarus flavipectoralis* (Scaridae). Two other pelagic economically important species *Caranx sexfasciatus* and *Sphyaena sp.* were found in large schools of juveniles on coral reefs in the area.

The density of coral reef fish recorded in 2002 at 6 reefs ranged from 575 (Hon Dam) to 2,017 individuals per 500 m^2 (Hon Vong), giving a mean value of $1,495 \pm 589.8$ individuals per 500 m^2 . Fish less than 10 cm were the most abundant. Fish at the majority of the transects were dominated by pomacentrids and labrids over 70 - 80 % of which fall into this smallest size class. *Caesio teres* was the commonest species contributing 100 to 300 fish at the shallow and deep transects respectively. The pomacentrid *Chromis ternatensis* formed schools amounting to over 500 individuals at some sites. Some important target fishes such as groupers > 30 cm, barramundi cod *Cromileptes altivelis*, sweetlips, humphead wrasse *Cheilinus undulates*, and bumphead parrotfish *Bolbometopon muricatum* were not recorded using the Reefcheck method during the reef surveys in 2002.

Mean abundance of ornamental fishes such as damselfish and wrasses was high at some sites with damselfish reaching up to 1,814 individuals per 500 m^2 at some sites and wrasses ranging from 45 to 117 individuals per 500 m^2 . Groupers and snappers were recorded at low numbers, less than 10 individuals per 500 m^2 , while parrotfish occurred with higher numbers on most of the reefs.

Larger fishes (size categories 21 – 30 cm and > 30 cm) were very scarce at all location and were mainly *Scarus flavipectoralis* and *Siganus guttatus* with length > 20 cm. Commercial fishes such as groupers, sweetlips, snappers, emperors of length greater than 30 cm were absent at all reefs.

4.8 Transient fish

Mackerels and tunas, including *Atule kalla*, *Rastrelliger kanagurta* and *Scomberomorus commersonii* have appeared in the waters surrounding the islands Hon Dam Ngang, Hon Mong Tay, Hon Vong, Hon May Rut, Hon Kim Quy (Anthoi area) at specific periods of the year. During these periods, hundreds of fishing boats concentrate at this area to catch these fish. Total production of mackerels and tunas landed in Phu Quoc islands reaches one thousand tons per year.

4.9 Marine mammals and sea turtles

Sea turtles used to be common in the waters around the Phu Quoc islands in the past, mainly hawksbill, *Eretmochelys imbricata* and green turtle, *Chelonia mydas*. Although detailed scientific information is not available, fishermen report extensive breeding beaches in the past. Dugongs *Dugong dugon* and dolphins *Delphinus* were regularly seen and caught by local fishermen in the past. One professional hunter of dugong at Bai Thom, Phu Quoc when interviewed stated that he had caught dugongs every year using the purse seine net “Luoi Quang” with mesh size of about 15 - 20 cm. The fisherman state that two dugongs with mean weight of 300 and 500 kg were caught in 2001 and during 2002 – 2004, there were about 4-5 dugongs caught per year.

4.10 Major exploitation

Phu Quoc is an important fishing ground in Kien Giang Province. In 1993, the capture fisheries yield of Phu Quoc district was 30,969 tons contributing 22 % of the total catch of the province. According to the data collected by the Phu Quoc Department of Agriculture, Forestry and Fisheries, the total fisheries yield of Phu Quoc in 2001 was 56,600 tons. The main fishing grounds are described as being in the south of Phu Quoc. The areas of An Thoi and east of Phu Quoc Island are also important squid and crab spawning grounds. The peak fishing season in Phu Quoc is from November to March. Together with Nam Du and Tho Chu islands, the large fishing grounds in the south-western region play an important role for fisheries industry of Viet Nam.

Finfish are the main contributors to the total fisheries production. At least, 67 species of teleost fish are caught in the area including representatives from the families Carangidae, Scombridae, Hemirhamphidae, Serranidae, Lutjanidae, Lethrinidae and Synodontidae. Many trevallies, jacks such as *Canrangoides ferdau*, *Caranx sexfasciatus*, *Selaroides leptolepis* and *Atule kalla*, mackerels *Rastrelliger kanagurta* and *Scomberomorus commersonii*, scad *Decapterus* and anchovies *Stolephorus* are represented in the pelagic fisheries. The total landings of mackerels and anchovies in 2001 were about 3,500 and 12,500 tons respectively (Data from Phu Quoc Department of Agriculture, Forestry and Fisheries).

The invertebrate fisheries are also important in the total catch of the district. Shrimps are most important in the demersal fisheries and according to the data collected by Phu Quoc Department of Agriculture, Forestry and Fisheries in 2001, as much as 2,680 tons of shrimps, *Penaeus merguensis* and others, and 3,879 tons of squid were caught for both local use and export.

Many commercially reef fish such as groupers, snappers, sweetlips, emperors, parrotfish and triggerfish are being caught because of the big demand of these fish in the market. Reef dwelling genera such as the groupers *Epinephelus*, *Plectropomus*, *Cephalopholis*, snappers *Lutjanus*, sweetlips *Plectorhynchus*, emperors *Lethrinus* and monocle breams *Scolopsis* have become the favoured targets and are being over-harvested on the reefs because of their high prices. Live groupers are often exported to Hong Kong, Taiwan, Japan. Other reef fish such as rabbitfish *Siganus* and fusiliers *Caesio* and *Pterocaesio* are also being caught in this area.

The main resources supported by seagrass beds are the swimming crabs: *Portunus pelagicus*, *Portunus sanguinolentus*, *Portunus sanguinolentus*; and the snails *Strombus canarium*, and *Strombus urceus*. These resources provide high production for inshore fisheries and are a major source of income for local fishermen.

In addition to fish, invertebrates are important targets to reef fisheries: pearl oysters *Pinctada mertensi* and *P. maxima*; abalone, *Haliotis ovina*; and scallops, *Chlamys nobilis* and *C. irregularis*; are exploited for food and jewelry. Information from interviews with local fishermen suggests that the number of *Pinctada maxima* caught at depths of 20 - 40 m by four hookah divers reached 50 - 60 kg within 5 days. Lobsters *Panulirus* have also become the important species to the fisheries. Collecting seashells for food or for sale in souvenir shops has increased in frequency and abalones *Haliotis ovina* are considered a commercially important food.

5. Scientific Importance

Phu Quoc is recognised as an area of very rich marine resources, which have played an important role to the livelihood of the local people and the economy of the province and district. Fisheries production ranks top among all provinces in Viet Nam and the area supports a diversity of habitats, including coral reefs and seagrass beds, and marine resources. Coral reefs are distributed over an extensive area among many islands, harbouring high biodiversity and communities distinct from other more oceanic sites outside the Gulf of Thailand. The mean coral cover was high with noticeable dominance of *Porites*, *Montipora* and *Pavona*. Reef-associated species such as fish, molluscs, echinoderms, and crustacea were abundant.

Seagrass beds in this area are the largest in extent in Viet Nam with 9 species recorded. This habitat is considered important not only for the livelihood of local communities but also since it harbours significant biodiversity and supports populations of migratory endangered species. The waters surrounding of the islands are home to many threatened and endangered species ranging from invertebrates to mammals such as dugong, dolphins, and sea turtles. Total species richness and generic diversity makes Phu Quoc an essential part of a proposed MPAs network necessary for marine conservation in Viet Nam.

During the last decade, signs of over-exploitation of reef and offshore fisheries, the degradation of marine habitats, such as coral reefs and seagrass beds, by natural and human impacts in the area have drawn attention from the local and national governments. Local government has shown concern about the sustainability of its marine resources and possible impacts from large-scaled development. Phu Quoc is located in the transboundary waters between Viet Nam and Cambodia hence it is also considered as an important area for migratory marine species.

6. Transboundary significance

6.1 Species of Transboundary Significance

The triton shell *Charonia tritonis* and giant clam *Tridacna squamosa* are considered indigenous species in Phu Quoc islands. Although *Charonia tritonis* is not common on the reefs they play an important ecological role in controlling outbreaks of *Acanthaster planci*. Fifteen species of living marine organism are considered to be at different levels of threat. Of these, 2 species of sea turtles and 2 species of giant clams are considered endangered and 2 species of marine mammals are considered critically endangered (IUCN 1993). Other species such as the abalone *Haliotis ovina*, tiger lobster *Panulirus ornatus*; pearl oyster *Pinctada mertensi*; sea cucumber *Holothuria scabra*; top shell *Trochus*; and triton shell *Charonia tritonis*; although not listed in the IUCN Red Data book have become rare and are considered as threatened in Viet Nam Red Data Book (Table 3).

6.2 Existing international recognition

Results from the surveys on biodiversity, resource utilization and conservation potential conducted in 1994 by WWF and the Institute of Oceanography, resulted in Phu Quoc being proposed as an MPA within the list of 7 proposed MPAs in Viet Nam. The area is a National Park and is proposed as one united protected Multiple Use Management Area. This area of Phu Quoc integrated protected area is 33,657 ha, of which 14,957 ha is terrestrial and 18,700 ha marine (ADB 1999).

7. Economic and Social Benefits

7.1 Economic Benefits

As of September 2002, the district had about 1,700 fishing vessels with total engine power of 61,585 horse powers. Total fisheries production of the district landed in September 2002 was about 56,608 tons. Fisheries are considered as the most important sector of district economy.

The development of tourism in the area will provide more jobs and benefit to the local community. Tourism can be expected to play an increasingly important role in the development strategies of the district for the next ten years. The number of tourists (mostly domestic) visiting the islands has increased dramatically during the last 7 years, from 4,543 people in 1995 to 74,997 people in 2001. The total international tourists visiting Phu Quoc in 1995 were 1,106 people, increasing to 42,748 people in 2001. The duration of stay of international visitors averaged 3 - 4 days per vacation per person while this value was higher, 3 - 5 days for domestic tourists. The total benefits to the district collected from tourism have increased from 1.5 billion in 1995 to 11 billion VND in 2001. At present, tourism in Phu Quoc has mainly focused on land while the marine environment, has not been exploited by, visitors. Tourists spend their time visiting the Nature Forest Reserve in the northern part of Phu Quoc Island and swimming at some beaches such as Bai Sao and Bai Vong beaches. The island group in the southern part of Phu Quoc (An Thoi) with its' pristine coral reefs has been considered by tourist organizers during the last three years and activities such as diving, snorkelling, and fishing are to be encouraged for marine eco-tourism in the Tourism Development Plan of the district. At present, only one hotel (Sai Gon - Phu Quoc Resort) has operated a diving service. It charges 20 - 110 USD/person including resort pleasure boat, guidance, mineral water, snack, insurance, life buoy and fishing equipment.

7.2 Social Benefits

The Population of Phu Quoc district inhabits the three main islands of Phu Quoc, Hon Thom and Hon Roi. The total population recorded in 2001 was 74,000, of which some 11,130 fishermen are engaged in capture fisheries in the sea while most of the rest work in fish processing and other related occupations on the island. Rich habitats and marine living resources in the waters support the area as "a biodiversity hot spot" in Viet Nam. It is considered that fisheries and tourism play a very important role in the development of economy of the district since they have provided jobs and benefits to the society. Many primary processing factories for marine products produce a variety of marine products. Fish sauce "nuoc mam", one such product, is produced in Phu Quoc and exported to many different countries around the world. This is a traditional industry that turns low-value fish into a profitable product through a long period of fermentation and processing with salt.

Table 4 List of species related to the levels of threats.

Species name	Levels of threat			
	Rare	Vulnerable	Endangered	Critically Endangered
1. <i>Dugong dugon</i>				+
2. <i>Delphinus sp.</i>				+
3. <i>Eretmochelys imbricata</i>			+	
4. <i>Chelonia mydas</i>			+	
5. <i>Pinctada margaritifera</i>		+		
6. <i>Pinctada maxima</i>		+		
7. <i>Pinctada mertensi</i>	+			
8. <i>Tridacna squamosa</i>			+	
9. <i>Tridacna crocea</i>			+	
10. <i>Haliotis ovina</i>	+			
11. <i>Panulirus ornatus</i>	+			
12. <i>Holothuria scabra</i>	+			
13. <i>Charonia tritonis</i>	+			
14. <i>Trochus niloticus</i>	+			
15. <i>Trochus maculatus</i>	+			

At present, there are 8 large hotels on the main island, mostly concentrated along the west coast of Phu Quoc Island and this number will increase in the next future. The development of tourism in the area will provide more jobs and benefit for the local community.

8. Legal Protection

At the present time, there are no special laws and regulations at national level specifying the process and materials required for coral reef conservation and management in Viet Nam. Most activities relating to protection and management of coral reefs and Marine Protected Area (MPA) are based on the following laws and regulations:

- The law on Environmental Protection (LEP) approved by the National Assembly on 27 December 1993 focuses on environmental management rather than resource allocation and planning.
- The Biodiversity Action Plan (BAP) approved by the Prime Minister on 22 December 1995, identifies the major causes for loss of biodiversity, the actions required to protect biodiversity and identifies priorities for management action and protection among the protected areas. Moreover, the BAP suggests three components for a marine conservation program: development of a marine protected area system; fisheries control and sustainable development; and the development of integrated coastal zone management for the country.

9. Management

9.1 Existing status and management plans

Phu Quoc Nature Reserve was approved by government document 194-CT in 1986 and then included in the MARD and MOSTE list of protected area in 1998. On 8 June 2001 Phu Quoc became a National Park under the Document 91 approved by the Prime Minister and the area of Phu Quoc National Park was expanded to 31,420 ha. ADB project proposed area of integrated Phu Quoc National Park as 33,657 ha including 14,957ha of terrestrial component and 18,700ha of marine component (ADB 1999) to meet purpose of Multiple Use Management. Recently, Phu Quoc is planned as a priority in the network of Marine Protected Areas designed by Ministry of Fisheries.

9.2 Management or conservation activities on site

Studies of the flora of the Phu Quoc islands were conducted in 1985, however, the surveys for marine conservation were implemented later with the first one in 1994 organized by WWF and the Institute of Oceanography. The results from the survey on biodiversity, resource utilization and conservation potential conducted in 1994 formed a baseline for the design of the proposed MPA and based on these results, some detailed studies of coral reefs and seagrass have been conducted subsequently by the Institute of Oceanography.

Conservation of sea turtles and marine mammals (*Dugong dugon*) started in 2002. A training course on marine conservation, focusing on conservation of sea turtles and dugongs, was organised by Indo-

China WWF in August 2002. These activities will be continuing in a long-term period. The province also has some investment for establishment of baseline for endangered species conservation in Phu Quoc islands.

9.3 Existing level, quality of site and support to institutional management

The National Park belongs to Kien Giang Department of Forestry Protection and has been managed by a forest guard unit with 32 staff, mostly focussing on forest protection. The annual operational budget is estimated at about 200 million VND per year. The management framework for the National Park has only recently been developed and most staff and managers have little knowledge of the marine environment, lack scientific training and equipment. As with all other MPAs in Viet Nam, Phu Quoc National Park has suffered from a lack of financial support and management capacity. At present, funding from public sector each year is not enough for operating expenditures. Marine resources around the islands have been managed by Phu Quoc Department of Agriculture, Forestry and Fisheries (DAFF) belonging to Kien Giang Department of Agriculture and Rural Development (DARD). At present, DAFF has 7 staff, of which 3 staff are responsible for the marine component of the area and report to the Department of Fisheries (DOF) and DARD of the province.

9.4 Long-term sustainability including prospects for revenue generation

The district Master Plan identified tourism as the first priority in Phu Quoc's development process over the next ten years. Reducing the number of small fishing boats (<45 hp) and building new ones with higher power to fish offshore will receive consideration and investment from local government in order to maintain and protect marine resources for long-term sustainability. Developing services such as primary processing of marine products, ice production for fishing boats and other services relating to fisheries will be emphasized. Zoning and planning of the area with coral reefs involved for marine eco-tourism such as diving, snorkelling, fishing and swimming will be implemented. Enhancing marine aquaculture potential of the area based on scientific research will be expanded in the development plan in the next ten years. With these plans, local government hopes to generate more jobs and benefits to local community, reduce overall fishing pressure and maintain marine resources.

9.5 Potential aspects that can be developed wisely in the site

Ecotourism development, comprising terrestrial and marine components, can be expanded with improvement of infrastructure conditions. Although marine eco-tourism has received very little interest from tourists to date the potential of this sector will become important in the near future. A combination of integrating forest adventure, diving, traditional fishing will generate revenues for both the forest reserve and the fishery sanctuary as well as creating employment.

Marine aquaculture has been developed over the last 5 years and is considered as an important component of the economic development of the district in the next ten years. Benefits collected from this sector are likely to be high. Total production provided by marine aquaculture in 2001 was 123 tons equal to 2 billion VND, of which seaweed *Kappaphycus alvarezii* comprised 100 tons. Culturing crabs, abalones, babyloons and seaweeds will be applied and expanded in larger scale in the next future.

10. Recommendations

Although Phu Quoc district is an isolated archipelago located offshore from the mainland the exchange between different localities in the province and outside of the province is very high. Geographical proximity and position of the islands make the islands well known nationally and internationally. Marine resources in Phu Quoc are very rich and play a very important role in the livelihood of the local people and economy of the district and the province. However, signs of over-exploitation are visible in both finfish fisheries and special products such as pearl oysters, lobsters, molluscs and sea cucumbers. Coral reefs and seagrass beds are distributed over extensive areas among the islands and support a rich marine fauna and flora. The water surrounding of the islands is home to many threatened and endangered species from invertebrates to mammals. On the other hand, geographical proximity and position of the islands making the Phu Quoc islands a potentially important area in both economic and ecological terms both to Viet Nam and the Gulf of Thailand.

From these stand-points, the need for conservation of coral reefs, seagrass beds and other habitats of Phu Quoc islands is clearly evident. Based on economic and social conditions of the district and

province, management strategies should be developed to maintain high biodiversity and improve living standard of local communities, and contribute for transboundary management.

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STAKEHOLDER INVOLVEMENT PLAN

1. Stakeholder identification

The stakeholders involved in the project were identified during project development period as in the following table:

Stakeholder	Role
<p>Central Government Departments & International Offices Specialized Executing Agencies (SEAs)</p> <p>Institute Oceanography (Nha Trang & Hai Phong)</p> <p>Southern Region Sub-Department of Environment Protection (SDoEP)</p> <p>World Wild Fund (WWF)</p> <p>SEA START RC</p>	<p>Executing agencies for coral reefs and seagrass sub-component</p> <p>Consultant and sub-contracts in charge of training, survey and monitoring</p> <p>Advisory role and national networking</p> <p>Consultant and sub-contract in charge of training, education</p> <p>Implementation, in charge of database & mapping</p>
<p>Provincial Government Departments Kiengiang Provincial People's Committee (PPC)</p> <p>Project Management Board (PMB)</p> <p>Project Steering Committee (PSC)</p> <p>Advisory Group (AG)</p> <p>Department of Finance (DoF)</p> <p>Fisheries Department (FD)</p> <p>Kiengiang Television (KTV)</p> <p>Phuquoc National Park (PNP)</p> <p>Fisheries Resources Protection Sub-Dept. (FRP)</p> <p>Fisheries Extension Center (FEC)</p>	<p>Project 'figurehead' and in charge of policy</p> <p>Managing for whole project</p> <p>Steering for whole project</p> <p>Consultant</p> <p>Consultant, in charge of finance</p> <p>Consultant, in charge of marine resources</p> <p>Public awareness</p> <p>Implementation, in charge of reforestation</p> <p>Implementation, in charge of training for crews & captains and support for enforcement</p> <p>Implementation, in charge of fisheries promotion.</p>
<p>District Government Departments Phuquoc Office of Agriculture, Forestry & Fisheries</p> <p>Phuquoc Broadcasting Station</p> <p>Border Army</p>	<p>Implementation, object to training and education</p> <p>Communication for local villagers.</p> <p>Support for enforcement</p>
<p>Private sectors Tourists businesses</p> <p>Processing fishery products</p> <p>Marine aquaculture companies</p> <p>Small businessmen who trade resources from coral reefs, seagrass beds</p>	<p>Eco-tourism modelling for sustainable coral reefs and seagrasses.</p> <p>Objects to be trained and involved in environment management</p> <p>Public awareness enhancement</p>
<p>Villagers living in coastal communities Local communities</p> <p>Women and Youth Unions, Fisheries Association</p> <p>Schoolchildren</p> <p>Low income groups who depend on coral reefs and seagrass</p>	<p>Involved in participatory process for planning and implementing of sub-demosite. Public awareness enhancement.</p> <p>Public awareness and income generating activities.</p> <p>Target groups for education</p> <p>Livelihood alternative program</p>

2. Information dissemination and consultation

Information will be provided to stakeholders using as many techniques as possible, in order to match techniques to target groups. Communication at the management level will be done through a **project steering committee** composed of representatives of the principal stakeholder groups who will make key decisions and determine the directional strategies of the project. Regular communication based on periodic or opportune consultants' meetings will notify the stakeholders of information and consultation about project progress, present situations and activities.

Organizational stakeholders will be also informed about events and activities through notices and letters of invitation. For the general public, **interview and personal invitation** are important means of communication in the context, and so community based organizations and local conservation groups will be asked to help pass on information to the public through their networks.

A regular **project implementation report** will be prepared on a six- month basis to inform the public about project progress and help emphasize key conservation messages, and wherever possible local and national **radio and newspapers** will be asked to help broadcast project activities. Many publications will be done through the project, ranging from public awareness campaign material to technical publications aiming at specialists working in seagrass beds and coral reefs 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 elicited 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 will be consulted separately on sensitive or complex issues rather than at open meetings.

3. Stakeholder participation in planning, decision-making, and execution of activities

A high level of public participation is crucial to the success of this project, and the project will aim at continuing the tradition of successful public participation, which has characterized previous seagrass bed and coral reef 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 seagrass beds and coral reefs 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

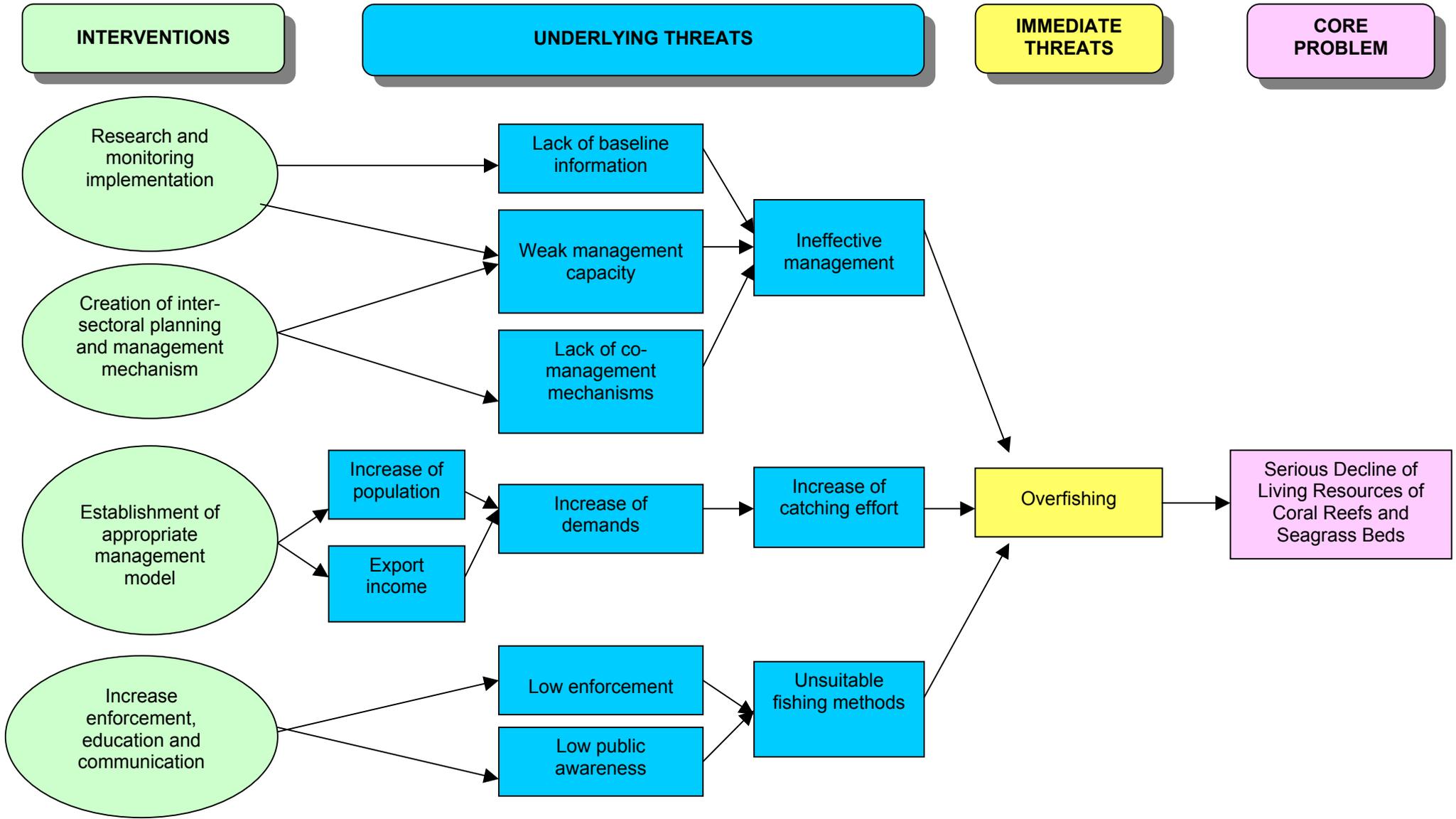
- Project managers will need to be aware of gender issues during the implementation of the project. Certain project activities will need to be devised with gender roles in mind and in some cases activities should be specifically targeted towards women. This is likely to be particularly important in work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

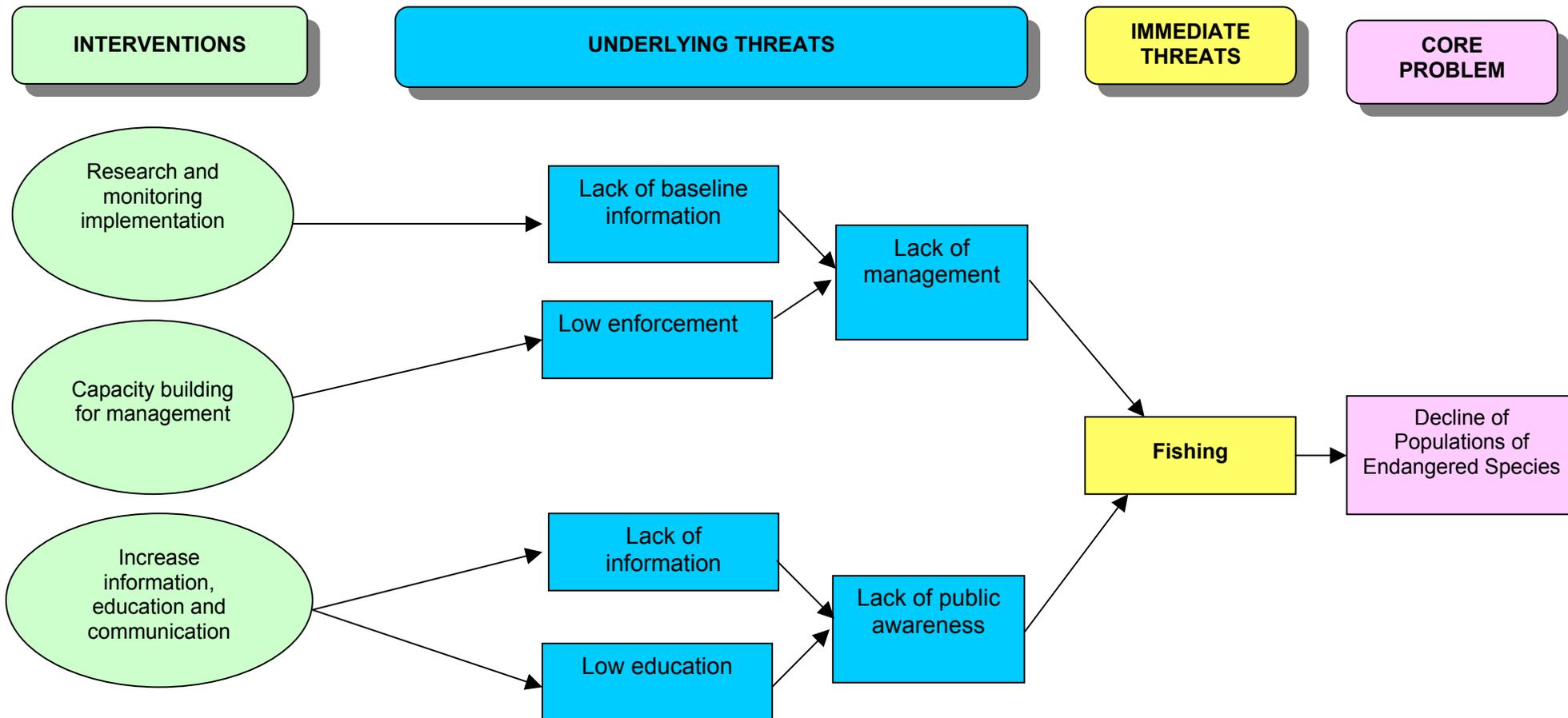
simply because they may lack the confidence to join in. In order to reach the needier sections of the target communities a special effort will be required. Locally based facilitators should work with local community groups to make a special effort to invite and encourage the less well off to attend project 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.

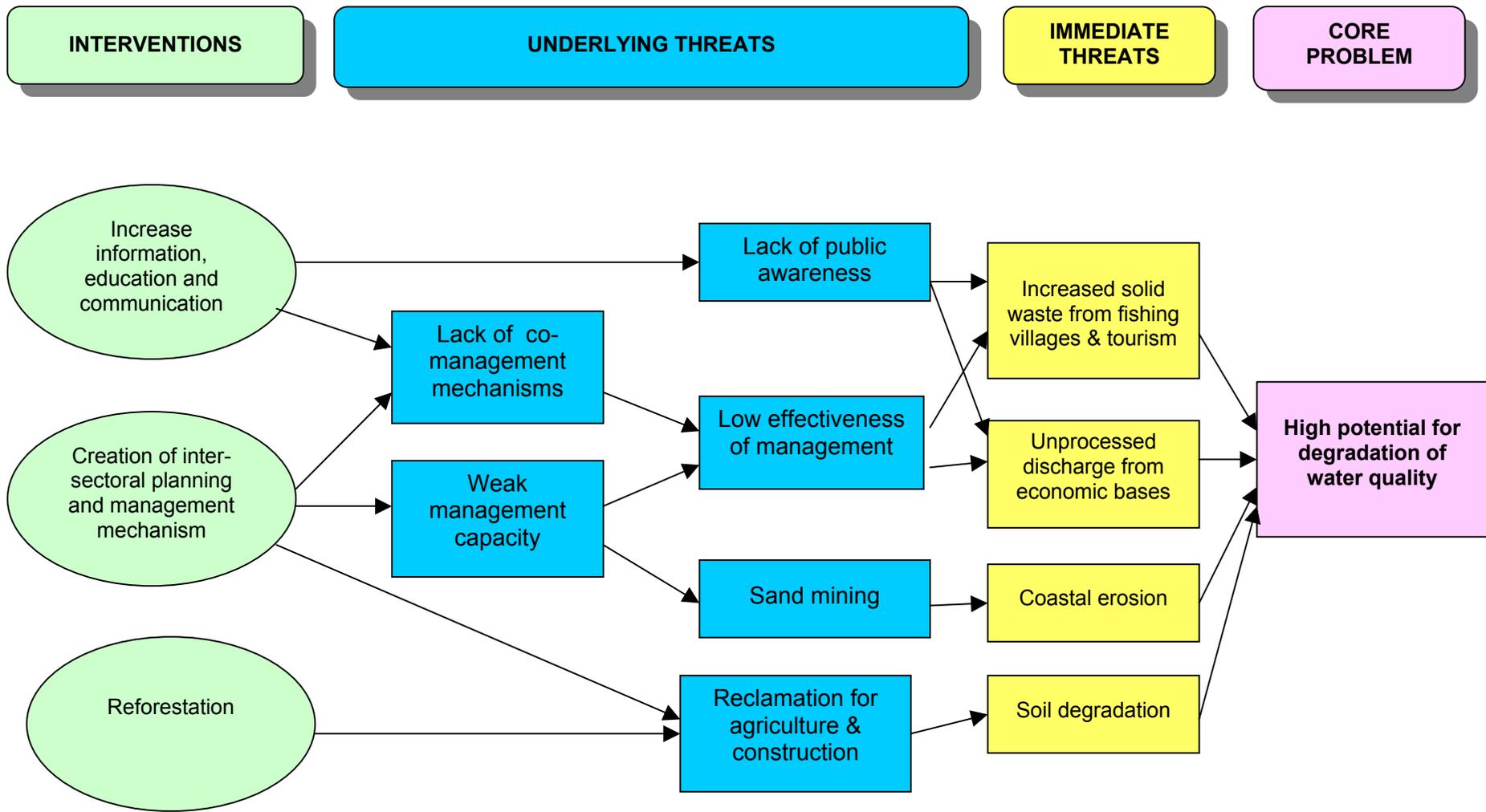
- Hierarchy and deference to authority have traditionally had an important place in society. Although this is changing, an appreciation of one's place in the social ladder is still often an important factor in rural culture. This can pose challenges to projects based around participatory approaches. 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 Phuquoc 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 seagrass beds and coral reefs 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 villagers.

APPENDIX 3 CAUSAL CHAIN ANALYSIS FOR PHU QUOC DEMONSTRATION SITE







MONITORING AND EVALUATION PLAN

1. Collecting and reporting data on performance indicators

The monitoring and evaluation of the project will require a set of key indicators of success. Monitoring and evaluation programs will be conducted by certain assigned consultants. Participatory evaluation at selected sites and questionnaire surveys will provide key information for monitoring and evaluation activities. Methods and frequency of data collection will be determined by the assigned evaluator to follow the donor requirements. The important indicators are as follows:

- Increased awareness on importance of coastal ecosystems and harmonization of development and conservation.
- Improved management capacity of National Park, Department of Resource and Environment, Department of Fisheries including fishery protection, district Department of Agriculture and Rural Development .
- Established appropriate coordinating mechanism for management of coastal resources in Phu Quoc district and developed information exchange and management integration with Cambodian colleagues.
- One hundred ha of coral reefs, 200 ha of seagrass beds managed tightly in different models. Decreased pressure to other areas of the habitats.
- Trained eight local people to do monitoring of coastal resources and environment
- Protected at least 3 nesting beaches of marine turtle and surrounding habitats .
- Stopped catching dugong in the waters around the islands.
- Tourist activities of the district directed to get long - term benefits.
- Improved benefit for at least 2 villages. More resources in near-shore waters for public fishing.

2. Schedule of monitoring and evaluation

<i>Monitoring/Evaluation</i>	<i>2005</i>				<i>2006</i>				<i>2007</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Ecological monitoring												
Mid-term review												
Evaluation the Progress by management board												
Evaluation in the end of project												

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. Evaluation the progress of the project will be regularly carried out by the management board. Long-term ecological and socio-economics monitoring program will be also performed by the assigned university

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, 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. Using monitoring and evaluation results for 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 board meetings. As far as possible, reporting to the management board will be integrated with reporting to the UNEP as well. The 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 coral reef 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. Establishment of an appropriate system to enable feedback and information from stakeholders on the project implementation will be also conducted.

Table 1 Estimated Budget by Components and Activities.

		GEF					Co-funding					Great Total			
		1000	2000	3000	4000	5000	1000	2000	3000	4000	5000	GEF	In Cash	In Kind	Total
1.1.1	Travel of official business for establishment and annual meeting of PSB [1.1.1]	2,700										2,700			2,700
1.1.1	Formal establishment of MB and organisation of annual meetings for policy and planning decisions [1.1.1]			10,065				13,275				10,065		13,275	23,340
1.1.2	Management Board Director (MB) [1.1.2]						16,500							16,500	16,500
1.1.2	Demonstration Site Manager (SM) [1.1.2]	16,500										16,500			16,500
1.1.2	Accountant [1.1.2]	2,475					2,475					2,475		2,475	4,950
1.1.2	Cashier [1.1.2]	2,475					2,475					2,475		2,475	4,950
1.1.2	Secretary [1.1.2]	2,475					2,475					2,475		2,475	4,950
1.1.2	Travel for MBs to observe the whole project [1.1.2]	2,400										2,400			2,400
1.1.2	DSA for MBs to observe and Meetings to manage the whole project [1.1.2]			5,400				5,400				5,400		5,400	10,800
1.1.2	MB&SM's participations in national workshops, conferences [1.1.2]			6,000								6,000			6,000
1.1.2	Translation [1.1.2]					2,970						2,970			2,970
1.1.3	Travel for formation of the Management Advisory Group (MAG) and annual meetings [1.1.3]	1,800										1,800			1,800
1.1.3	Formation of the Management Advisory Group and organisation of annual meetings [1.1.3]			6,945				6,825				6,945		6,825	13,770
1.1.4	Stationary for maintenance of the project office [1.1.4]				3,300							3,300		3,300	6,600
1.1.4	Computer, scanner, printer, camera and video camera for maintenance of the project office [1.1.4]				5,500							5,500			5,500
1.1.4	Tables, chairs and decoration for maintenance of the project office [1.1.4]				980							980			980
1.1.4	Project office for maintenance of the project office [1.1.4]									6,000				6,000	6,000
1.1.4	Communication for maintenance of the project office [1.1.4]					6,600						6,600			6,600
1.1.5	Project management (Auditing, Monitoring and Evaluation) [1.1.5]					11,700						11,700			11,700
1.1.6	Consultant for development of draft management plan [1.1.6]	4,390					4,750					4,390		4,750	9,140
1.1.6	Travel of official business for development of draft management plan [1.1.6]	600										600			600
1.1.7	Consultant for reviewing of draft by local/district stakeholders [1.1.7]	180					180					180		180	360
1.1.7	Review of draft of management plan by local/district stakeholders [1.1.7]		825					1,475				825		1,475	2,300
1.1.8	Consultant revision and submission to the Management Board for review and approval [1.1.8]	180					180					180		180	360
1.1.8	Documenting revision and submission to the Management Board for review and approval [1.1.8]		100					100				100		100	200
1.1.9	Formal approval of the management plan at the Provincial level [1.1.9]		750					750				750		750	1,500
1.1.10	Publication of maps, guideline, management plan [1.1.10]					2,000						2,000		2,000	4,000
1.2.1	International travel for joint meeting both MBs/MAGs of VN&CPC [1.2.1]	3,000										3,000			3,000
1.2.1	Domestic travel of 2 officers to Phu Quoc for joint meeting both VN&CPC [1.2.1]	1,200										1,200			1,200
1.2.1	Joint meeting both MBs/AGs between VN&CPC 4 times (2 times in Kampot and 2 times in Phu Quoc) [1.2.1]			8,680				11,800				8,680		11,800	20,480
1.2.2	Consultant for development of policy and cooperation framework for ecosystems [1.2.2]	300					300					300		300	600
1.2.2	International travel for development of policy and cooperation framework for ecosystems [1.2.2]	1,500										1,500			1,500
1.2.2	Domestic travel for development of policy and cooperation framework for ecosystems [1.2.2]	1,500										1,500			1,500
1.2.2	Development of policy and cooperation framework for ecosystems co-management of project area [1.2.2]			3,390				6,050				3,390		6,050	9,440
2.1.1	Consultant for CR surveys and assessment [2.1.1]	300					300					300		300	600
2.1.1	Surveys on biodiversity and resources of CRs [2.1.1]		16,450					2,200				16,450		2,200	18,650
2.1.2	Consultant for SG surveys and assessment [2.1.2]	300					300					300		300	600
2.1.2	Surveys on biodiversity and resources of SG beds [2.1.2]		21,950					1,400				21,950		1,400	23,350
2.1.3	Consultant for socio-economics surveys and assessment [2.1.3]	300					300					300		300	600
2.1.3	Survey on resource use and market-based economic values - entire area [2.1.3]		3,930					850				3,930		850	4,780
2.1.4	Consultant for review of CR monitoring guideline [2.1.4]	150					150					150		150	300
2.1.4	Establishing monitoring methodology for CRs environmental state [2.1.4]		3,800					800				3,800		800	4,600
2.1.5	Consultant for review of SG bed monitoring guideline [2.1.5]	150					150					150		150	300
2.1.5	Establishing monitoring methodology for SG bed environmental state [2.1.5]		3,800					800				3,800		800	4,600
2.1.6	Annual monitoring activities of CR sub-demonstration site [2.1.6]		14,665					475				14,665		475	15,140
2.1.7	Annual Monitoring activities for SG sub-demonstration site [2.1.7]		15,120					2,700				15,120		2,700	17,820

Table2 Budget Allocation by Object of Expenditure.

	1 st 2005				2 nd 2005				1 st 2006				2 nd 2006				1 st 2007				2 nd 2007									
	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total																		
		In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind		In cash	In kind				
1000 Project Personal Component																														
1100 Project Personnel																														
1101 Management Board Director (MB) [1.1.2]			2,750	2,750			2,750	2,750			2,750	2,750			2,750	2,750			2,750	2,750			2,750	2,750			-	-	16,500	16,500
1102 Demonstration Site Manager (SM) [1.1.2]	2,750			2,750	2,750			2,750	2,750			2,750	2,750			2,750	2,750			2,750	2,750			2,750	16,500		-	-	16,500	
1103 Accountant [1.1.2]	412	412	824	413	413	413	826	412	412	413	826	413	413	413	826	412	412	413	826	413	826	413	413	826	2,475		-	-	2,475	4,950
1104 Cashier [1.1.2]	412	412	824	413	413	413	826	412	412	413	824	413	413	413	826	412	412	413	824	413	826	413	413	826	2,475		-	-	2,475	4,950
1199 Total	3,574	-	3,574	7,148	3,576	-	3,576	7,152	3,574	-	3,574	7,148	3,576	-	3,576	7,152	3,574	-	3,574	7,148	3,576	-	3,576	7,152	21,450	-	-	-	21,450	42,900
1200 Consultant																														
1201 Consultant for development of draft management plan [1.1.6]				-				-	4,240		4,600	8,840	150		150	300				-				-	4,390		-	-	4,750	9,140
1202 Consultant for reviewing of draft by local/district stakeholders [1.1.7]				-				-				-	90		90	180	90		90	180				-	180		-	-	180	360
1203 Consultant revision and submission to the Management Board for review and approval [1.1.8]				-				-				-	90		90	180	90		90	180				-	180		-	-	180	360
1204 Consultant for development of policy and cooperation framework for ecosystems [1.2.2]				-	300		300	600				-				-				-				-	300		-	-	300	600
1205 Consultant for coral reef surveys and assessment [2.1.1]	300		300	600				-				-				-				-				-	300		-	-	300	600
1206 Consultant for seagrass surveys and assessment [2.1.2]	300		300	600				-				-				-				-				-	300		-	-	300	600
1207 Consultant for socio-economics surveys and assessment [2.1.3]				-	300		300	600				-				-				-				-	300		-	-	300	600
1208 Consultant for review of coral reef monitoring guideline [2.1.4]	150		150	300				-				-				-				-				-	150		-	-	150	300
1209 Consultant for review of seagrass bed monitoring guideline [2.1.5]	150		150	300				-				-				-				-				-	150		-	-	150	300
1299 Total	900	-	900	1,800	600	-	600	1,200	4,240	-	4,600	8,840	330	-	330	660	180	-	180	360	-	-	-	-	6,250	-	-	-	6,610	12,860
1300 Administration support																														
1301 Secretary [1.1.2]	412	413	825	413	412	412	825	412	413	825	413	412	825	412	413	825	413	412	825	413	412	825	412	825	2,475		-	-	2,475	4,950
1399 Total	412	-	413	825	413	-	412	825	412	-	413	825	413	-	412	825	412	-	413	825	413	-	412	825	2,475	-	-	-	2,475	4,950
1600 Travel on office business																														
1601 Travel of official business for establishment and annual meeting of PSB [1.1.1]	900			900				-	900			900				-	900			900				-	2,700		-	-	2,700	
1602 Travel for MBs to observe the whole project [1.1.2]	400			400	400			400	400			400	400			400	400			400	400			-	400	2,400		-	2,400	
1603 Travel for formation of the Management Advisory Group (MAG) and annual meetings [1.1.3]				-	600			600				-	600			600				-	600			-	600	1,800		-	1,800	
1604 Travel of official business for development of draft management plan [1.1.6]				-				-	600			600				-				-				-	600			-	600	
1605 International travel for joint meeting both MBs/MAGs of VN&CPC [1.2.1]				-	1,000			1,000	500			500	1,000			1,000				-	500			-	500	3,000		-	3,000	
1606 Domestic travel of 2 officers to Phu Quoc for joint meeting both VN&CPC [1.2.1]	400			400				-	200			200	400			400				-	200			-	200	1,200		-	1,200	
1607 International travel for development of policy and cooperation framework for ecosystems [1.2.2]				-	1,500			1,500				-				-				-				-	1,500			-	1,500	
1608 Domestic travel for development of policy and cooperation framework for ecosystems [1.2.2]				-	1,500			1,500				-				-				-				-	1,500			-	1,500	
1699 Total	1,700	-	-	1,700	5,000	-	-	5,000	2,600	-	-	2,600	2,400	-	-	2,400	1,300	-	-	1,300	1,700	-	-	-	1,700	-	-	-	1,700	14,700
1999 Component Total	6,586	-	4,887	11,473	9,589	-	4,588	14,177	10,826	-	8,587	19,413	6,719	-	4,318	11,037	5,466	-	4,167	9,633	5,689	-	3,988	9,677	44,875	-	-	-	30,535	75,410

Table2 continued Budget Allocation by Object of Expenditure.

2000	Sub-Contract Component	1 st 2005				2 nd 2005				1 st 2006				2 nd 2006				1 st 2007				2 nd 2007			
		GEF	Co-funding		Total																				
			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind	
2200	Sub-Contract Component																								
2201	Review of draft of management plan by local/district stakeholders [1.1.7]																								
2202	Documenting revision and submission to the Management Board for review and approval [1.1.8]																								
2203	Formal approval of the management plan at the Provincial level [1.1.9]																								
2204	Surveys on biodiversity and resources of Coral Reefs [2.1.1]																								
2205	Surveys on biodiversity and resources of Seagrass beds [2.1.2]																								
2206	Survey on resource use and market-based economic values - entire area [2.1.3]																								
2207	Establishing monitoring methodology for coral reefs environmental state [2.1.4]																								
2208	Establishing monitoring methodology for seagrass bed environmental state [2.1.5]																								
2209	Annual monitoring activities of coral reef sub-demonstration site [2.1.6]																								
2210	Annual Monitoring activities for seagrass sub-demonstration site [2.1.7]																								
2211	Development of GIS database done by SEA START RC. This budget will be used for all items [2.2.1], [2.2.2], [2.2.3], [2.2.4], [2.2.5], [2.2.6]																								
2212	Reforestation by National park of Phu Quoc [4.2.1]																								
2213	Management plan of sub demosite for coral reef involving local community, stakeholders [5.1.1]																								
2214	Coral reef biophysical surveys in detail for zoning & regulation preparation [5.1.2]																								
2215	Workshops at provincial and local levels on zonation and regulations [5.1.3]																								
2216	Approval of zoning plan by the appropriate authorities [5.1.4]																								
2217	Zoning/demarcation (bouy setting) [5.1.5]																								
2218	Participatory preparation of regulations regarding agreed uses within coral reef zones [5.1.6]																								
2219	Enforcement & surveillance with involvement of local community (patrol, allowance, boat) [5.1.7]																								
2220	Guideline for sustainable uses (fishing, tourism), fisheries promotion and awareness raising on CR [5.1.8]																								
2221	Rehabilitation trial of coral reefs at a damaged reef at An Thoi island [5.1.9]																								
2222	Management plan of sub demosite for seagrass involving local community, stakeholders [5.2.1]																								
2223	Seagrass biophysical surveys in details for zoning & regulation preparation [5.2.2]																								
2224	Workshops at provincial and local levels on zonation and regulations [5.2.3]																								
2225	Approval of zoning plan by the appropriate authorities [5.2.4]																								
2226	Design and establish buoys [5.2.5]																								
2227	Participatory preparation of regulations regarding agreed uses within seagrass zones [5.2.6]																								
2228	Enforcement & surveillance with involvement of local community (patrol, allowance, boat) [5.2.7]																								

Table2 continued Budget Allocation by Object of Expenditure.

		1 st 2005				2 nd 2005				1 st 2006				2 nd 2006				1 st 2007				2 nd 2007								
		GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total					
			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind		In cash	In kind			
3305	Meetings with provincial authorities and private sectors for familiarisation with the project [4.1.1]	-	-	-	1,605	1,755		3,360	1,605	1,755		3,360	1,605	1,755		3,360	1,605	1,755		3,360				6,420	7,020		13,440			
3306	Meetings with districtal authorities and fishermen for familiarisation with the project [4.1.2]			-		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000			5,000		5,000			
3399	Total	3,355	-	4,425	7,780	6,090	2,755	5,225	14,070	3,775	2,755	2,950	9,480	9,445	2,755	9,650	21,850	10,520	2,755	13,425	26,700	2,315	1,000	2,275	5,590	35,500	12,020	37,950	85,470	
3999	Component Total	5,255	-	5,325	10,580	24,860	17,755	10,575	53,190	16,525	2,755	6,000	25,280	16,245	17,755	10,850	44,850	12,420	2,755	14,325	29,500	4,215	16,000	3,175	23,390	79,520	57,020	50,250	186,790	
4000	Equipment Component																													
4100	Expendable Equipment																													
4101	Stationary for maintenance of the project office [1.1.4]	550		550	1,100	550		550	1,100	550		550	1,100	550		550	1,100	550		550	1,100	550		550	1,100	3,300		3,300	6,600	
4199	Total	550	-	550	1,100	550	-	550	1,100	550	-	550	1,100	550	-	550	1,100	550	-	550	1,100	550	-	550	1,100	3,300	-	3,300	6,600	
4200	Non Expendable Equipment																													
4201	Computer, scanner, printer, camera and video camera for maintenance of the project office [1.1.4]	5,500			5,500																						5,500		5,500	
4299	Total	5,500	-	-	5,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,500	-	5,500	
4300	Premises																													
4301	Tables, chairs and decoration for maintenance of the project office [1.1.4]	980			980																						980		980	
4302	Project office and the maintenance of the project office [1.1.4]			6,000	6,000																								6,000	6,000
4303	Hiring a part of local house for guard station of CR demosite [5.1.7]								300			300	300			300											600		600	
4304	Boat hiring and enclosed things for enforcement implementation CR demosite [5.1.7]								4,000			4,000	4,000			4,000											8,000		8,000	
4305	Hiring a part of local house for guard station of SG demosite [5.2.7]								300			300	300			300											600		600	
4306	Boat hiring and enclosed things for enforcement implementation of SG demosite [5.2.7]								4,000			4,000	4,000			4,000											8,000		8,000	
4399	Total	980	-	6,000	6,980	-	-	-	8,600	-	-	8,600	8,600	-	-	8,600	-	-	-	-	-	-	-	-	-	-	18,180	-	6,000	24,180
4999	Component Total	7,030	-	6,550	13,580	550	-	550	1,100	9,150	-	550	9,700	9,150	-	550	9,700	550	-	550	1,100	550	-	550	1,100	26,980	-	9,300	36,280	
5000	Miscellaneous component																													
5200	Reporting Costs																													
5201	Translation [1.1.2]	495			495	495			495	495		495	495		495	495		495	495		495	495		495	2,970			2,970		
5202	Project management (Auditing, Monitoring and Evaluation) [1.1.5]								900			900	4,500			4,500	900		900	5,400			5,400	11,700				11,700		
5203	Publication of maps, guideline, management plan [1.1.10]														2,000		2,000	4,000								2,000		2,000	4,000	
5204	100 posters for development of training materials for public awareness [3.1.1]				1,000			1,000																			1,000		1,000	
5205	1 CD video film for development of training materials for public awareness [3.1.2]				2,500		2,500	5,000																			2,500		2,500	5,000
5206	1000 leaflets for development of training materials for public awareness [3.1.3]				1,000		1,000	2,000																			1,000		1,000	2,000
5207	Printing leaflets, poster, brochures, handbooks,... related to activities on Marine for trainees [4.3.2]					30,000		30,000																				30,000		30,000

Table2 continued Budget Allocation by Object of Expenditure.

		1 st 2005				2 nd 2005				1 st 2006				2 nd 2006				1 st 2007				2 nd 2007				Total				
		GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	GEF	Co-funding		Total	
			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind			In cash	In kind		In cash
5208	Leaflet, poster, guider book for guideline for sustainable uses, fisheries promotion and awareness raising on CR [5.1.8]				-				-	2,000	2,000		4,000				-				-				-	2,000	2,000		-	4,000
5209	Leaflet, poster, guider book for guideline for sustainable uses (fishing, tourism) and awareness raising on SG [5.2.8]				-				-	1,000	1,000		2,000				-				-				-	1,000	1,000		-	2,000
5299	Total	495	-	-	495	4,995	30,000	3,500	38,495	4,395	3,000	-	7,395	4,995	-	-	4,995	3,395	-	2,000	5,395	5,895	-	-	5,895	24,170	33,000	5,500	62,670	
5300	Sundry																													
5301	Communication for maintenance of the project office [1.1.4]	1,100			1,100	1,100			1,100	1,100			1,100	1,100			1,100	1,100			1,100	1,100			1,100	6,600				6,600
5399	Total	1,100	-	-	1,100	1,100	-	-	1,100	1,100	-	-	1,100	1,100	-	-	1,100	1,100	-	-	1,100	1,100	-	-	1,100	6,600	-	-	6,600	
5999	Component Total	1,595	-	-	1,595	6,095	30,000	3,500	39,595	5,495	3,000	-	8,495	6,095	-	-	6,095	4,495	-	2,000	6,495	6,995	-	-	6,995	30,770	33,000	5,500	69,270	
9999	Project Total	24,783	21,500	17,832	34,115	102,146	69,255	31,323	202,724	111,879	29,505	10,527	181,911	36,745	11,505	22,009	130,259	31,122	24,255	23,867	79,244	28,325	37,500	10,012	75,837	365,000	223,520	145,570	734,090	
																										365,000	223,520	145,570	734,090	

Table 3 Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In cash	In kind	
1.1. National Action					
1.1.1. Formal establishment of the Management Board by the Chairman of the Provincial People's Committee and organisation of annual meetings for policy and planning decisions.					
		12,765.0		13,275.0	26,040.0
Travel of official business (3 pers., 3 meetings)		2,700.0			2,700.0
DSA for official business (3 pers., 3 meetings, 3 days)		810.0			810.0
Travel of 10 leaders outside Phuquoc (3 meetings)		3,000.0			3,000.0
DSA for 20 people including 10 leaders and 10 participants; 3 meetings; 3 days)		5,400.0			5,400.0
Inkind co-funding (20 pers., 3 meetings, 3 days)				12,600.0	12,600.0
Equipment for presentations (3 meetings)		180.0		0.0	180.0
Transport for meetings (3 meetings)		300.0		300.0	600.0
Miscellaneous (3 meetings)		375.0		375.0	750.0
1.1.2. Operation of Management Board					
		40,695.0		29,325.0	70,020.0
Management Board Director (MB) (1 person, 15days/month, 33 months)		0.0		16,500.0	16,500.0
Demonstration Site Manager (SM) (1 person, 30days/month, 33 months)		16,500.0		0.0	16,500.0
Secretary (1 person, 10days/month, 33 months)		2,475.0		2,475.0	4,950.0
Accountant (1 person, 10days/month, 33 months)		2,475.0		2,475.0	4,950.0
Cashier (1 person, 10days/month, 33 months)		2,475.0		2,475.0	4,950.0
Travel for MBs to observe the whole project (average: 2 pers., 4times/year, 3 years)		2,400.0		0.0	2,400.0
DSA for MBs to observe the whole project (average: 2 pers., 5days/time, 4times/year, 3 years)		3,600.0		0.0	3,600.0
Meeting of Management Board (4 times/year, 3 years, lump sum for 5 pers.)		1,800.0		5,400.0	7,200.0
MB&SM's participations in national workshops, conferences (lump sum, twice, 3 years, 2 pers.)		6,000.0		0.0	6,000.0
Translation (30pages/month; 3\$/page; 33 months)		2,970.0		0.0	2,970.0
1.1.3. Formation of the Management Advisory Group and organisation of annual meetings.					
		8,745.0		6,825.0	15,570.0
Travel of Management Advisory Group (2 pers., 3 meetings)		1,800.0		0.0	1,800.0
DSA for Advisers (2 pers., 3 meetings, 3 days)		540.0		0.0	540.0
Travel of 10 leaders outside Phuquoc (3 meetings)		3,000.0		0.0	3,000.0
DSA for 10 leaders (3 meetings, 3 days)		2,700.0		0.0	2,700.0
Inkind co-funding (10 pers., 3 meetings, 3 days)				6,300.0	6,300.0
Equipment for presentations (3 meetings)		180.0		0.0	180.0
Transport for meetings (3 meetings)		225.0		225.0	450.0
Miscellaneous (3 meetings)		300.0		300.0	600.0
1.1.4. Maintenance of the project office					
		16,380.0		9,300.0	25,680.0
Project office (1 house, 3 years)		0.0		6,000.0	6,000.0
Communication (internet, phone, fax, postage)		6,600.0		0.0	6,600.0
Computer, scanner, printer, camera and video camera		5,500.0		0.0	5,500.0
Tables, chairs and decoration		980.0		0.0	980.0
Stationary		3,300.0		3,300.0	6,600.0
1.1.5. Project management					
		11,700.0		0.0	11,700.0
Auditing (yearly, 3 years)		2,700.0			2,700.0
Project Monitoring and Evaluation (mid-term, the end of the project)		9,000.0			9000
1.1.6. Development of draft management plan					
		4,990.0		4,750.0	9,740.0
Consultant for management plan development (2months)		4,390.0		0.0	4,390.0
Travel of official business (2 pers.)		600.0		0.0	600.0
Co-funding (20 local pers, 3 days working with consultants & local travel, miscellaneous)				4,750.0	4,750.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			in cash	In-kind	
1.1.7. Review of draft of management plan by local/district stakeholders		1,005.0		1,655.0	2,660.0
Consultant for reviewing of draft (2 reviewers, 3 days)		180.0		180.0	360.0
Meeting with 20 participant (1 meeting, 20 pers., 1 day)		600.0		0.0	600.0
Inkind co-funding (20 pers., 1 meetings, 1 days)				1,400.0	1,400.0
Hiring the meeting room (1 time, 1 day)		150.0		0.0	150.0
Documenting (postage, printing, photocopy,..)		75.0		75.0	150.0
1.1.8. Revision of draft and submission to the Management Board for review and approval		280.0		280.0	560.0
Consultant for revision (2 pers., 3 days)		180.0		180.0	360.0
Documenting (postage, printing, photocopy,..)		100.0		100.0	200.0
1.1.9. Formal approval of the management plan at the Provincial level		750.0		750.0	1,500.0
1.1.10. Publication of maps, guideline, management plan.		2,000.0		2,000.0	4,000.0
Map printing (50 maps)		1,000.0		1,000.0	2,000.0
Guideline and management plan printing (50 manuals)		1,000.0		1,000.0	2,000.0
1.2. Joint Action					
1.2.1. Joint meeting both managers/advisory groups and management boards from the countries 4 times (including 2 times in Kampot and 2 times in Phuquoc)		12,880.0		11,800.0	24,680.0
International travel of official business (2 times, 5 pers.)		3,000.0		0.0	3,000.0
DSA for international meeting (2 times, 4 days, 5 pers.) in Kampot		1,080.0		0.0	1,080.0
Domestic travel of 2 officers to Phuquoc (2 times)		1,200.0		0.0	1,200.0
Domestic travel of 5 members of MB to Phuquoc (2 times)		1,000.0		0.0	1,000.0
DSA for domestic meeting (2 times, 4 days, 20 pers.)		4,800.0		0.0	4,800.0
Inkind co-financing from time (2 times, 4 days, 20 pers.)		0.0		11,200.0	11,200.0
Meeting room for domestic workshops (2 times, 4 days)		1,200.0		0.0	1,200.0
Transport for meetings (2 times)		200.0		200.0	400.0
Miscellaneous		400.0		400.0	800.0
1.2.2. Development of policy and cooperation framework for ecosystems co-management of project area		6,690.0		6,350.0	13,040.0
Consultant for development of the framework (2 persons, 5 days)		300.0		300.0	600.0
International travel of official business (1 time, 5 pers.)		1,500.0		0.0	1,500.0
DSA for international meeting (1 time, 4 days, 5 pers.) in Kampot		540.0		0.0	540.0
Domestic travel of official business (1 time, 5 pers. Far from Kiengiang)		1,500.0		0.0	1,500.0
DSA for domestic meeting (1 time, 4 days, 20 pers.)		2,400.0		0.0	2,400.0
Inkind co-financing from time (1 times, 4 days, 20 pers.)				5,600.0	5,600.0
Hiring meeting room (2 days, 1 time)		150.0		150.0	300.0
Transport for meetings (1 time)		100.0		100.0	200.0
Miscellaneous		200.0		200.0	400.0
2.1. Surveys on biodiversity and resources					
2.1.1. Surveys on biodiversity and resources of Coral Reefs		16,750.0		2,500.0	19,250.0
Consultant for coral reef surveys and assessment		300.0		300.0	600.0
Travels for researchers (5 pers., 2 times)		3,000.0		0.0	3,000.0
DSA for researchers (10 days/time, 2 times, 5 pers.)		3,000.0		0.0	3,000.0
DSA for local people (10 days/time, 2 times, 2 pers.)		600.0		0.0	600.0
Boat hiring (10 days/time, 2 times)		1,600.0		0.0	1,600.0
Equipment hiring (4 sets of diving equipment/day, 10days/time, 2 times)		800.0		800.0	1,600.0
Biological sample analysis		3,000.0		0.0	3,000.0
Water quality analysis		2,250.0		0.0	2,250.0
Distribution mapping of coral reefs and database		1,000.0		1,000.0	2,000.0
Data analysis and reporting (4 sub-reports, 10 days)		800.0		0.0	800.0
Local transport (10 days)		250.0		250.0	500.0
Miscellaneous		150.0		150.0	300.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In - cash	In-kind	
2.1.2. Surveys on biodiversity and resources of Seagrass beds		22,250.0		1,700.0	23,950.0
Consultant for seagrass surveys and assessment		300.0		300.0	600.0
Travels (5 persons, 2 times)		3,000.0		0.0	3,000.0
DSA for researchers (10 days, 5 pers./time, 2 times)		3,000.0		0.0	3,000.0
DSA for local people (10 days/time, 2 times, 2 pers.)		600.0		0.0	600.0
Boat hiring (10 days/time, 2 times)		1,600.0		0.0	1,600.0
Equipment hiring (4sets of diving equipment/day, 10days/time, 2 times)		1,600.0		0.0	1,600.0
Analysis biological samples: seagrass, algae, zoobenthos, neckton, fishes		4,500.0		0.0	4,500.0
Analysis water quality		2,250.0		0.0	2,250.0
Mapping seagrass distribution and database		1,000.0		1,000.0	2,000.0
Analysis and reporting (4 sub-reports: seagrass, benthos, environment and fishes)		2,000.0		0.0	2,000.0
Sub-contract with local people for researching dugong and turtles		2,000.0		0.0	2,000.0
Local transport (10days)		250.0		250.0	500.0
Miscellaneous		150.0		150.0	300.0
2.1.3 Survey on resource use and market-based economic values - entire area		4,230.0		1,150.0	5,380.0
Consultant for socio-economic surveys and assessment		300.0		300.0	600.0
Travel (3 persons, 2 trip)		900.0		0.0	900.0
DSA for researchers (3 pers., 7 days/time, 2 times)		1,260.0		0.0	1,260.0
DSA for local people (7 days/time, 2 times, 2 pers.)		420.0		0.0	420.0
Report		500.0		0.0	500.0
Local transport (7 days/time, 2 times)		700.0		700.0	1,400.0
Miscellaneous		150.0		150.0	300.0
2.1.4. Establishing monitoring methodology for coral reefs environmental state		3,950.0		950.0	4,900.0
Consultant for review of coral reef monitoring guideline		150.0		150.0	300.0
Travel for invited experts and managers (3 pers., 1 time)		900.0		0.0	900.0
DSA for experts and managers (2 days, 3 pers., 1 time)		180.0		0.0	180.0
Writing (3 pers., 3 subjects, 10 days)		1,800.0		0.0	1,800.0
Hiring meeting room (2 days, 1 time)		150.0		150.0	300.0
Seminar		500.0		500.0	1,000.0
Equipment for presentations		120.0		0.0	120.0
Miscellaneous		150.0		150.0	300.0
2.1.5. Establishing monitoring methodology for seagrass bed environmental state		3,950.0		950.0	4,900.0
Consultant for review of seagrass bed monitoring guideline		150.0		150.0	300.0
Travel for invited experts and managers (3 pers., 1 time)		900.0		0.0	900.0
DSA for experts and managers (2 days, 3 pers., 1 time)		180.0		0.0	180.0
Writing (3 pers., 3 subjects, 10 days)		1,800.0		0.0	1,800.0
Hiring meeting room (2 days, 1 time)		150.0		150.0	300.0
Seminar		500.0		500.0	1,000.0
Equipment for presentations (2 days)		120.0		0.0	120.0
Miscellaneous		150.0		150.0	300.0
2.1.6. Annual monitoring activities of coral reef sub-demonstration site		14,665.0		475.0	15,140.0
Travel for researchers (4 pers., 3 years, 1 time/year)		3,600.0		0.0	3,600.0
DSA for researchers (4 pers., 7 days, 1 time/ year, 3 years)		2,520.0		0.0	2,520.0
DSA for local participants (4 pers., 4 days, 3 places, 3 years)		2,160.0		0.0	2,160.0
Boat hiring (7 days, 1time/year, 3 years)		1,680.0		0.0	1,680.0
Equipment hiring (4 sets, 7 days/time, 1time/year, 3 years)		1,680.0			1,680.0
Analysing samples (10 samples, 5 groups, 3 years)		2,250.0		0.0	2,250.0
Annual report		300.0		0.0	300.0
Local transport (7 days)		175.0		175.0	350.0
Miscellaneous		300.0		300.0	600.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (In \$US)	GEF	Co - Funding		Total
			In- cash	In - kind	
2.1.7. Annual Monitoring activities for seagrass sub-demonstration site		15,120.0		2,700.0	17,820.0
Travel (3 researchers, 3 times)		2,700.0		0.0	2,700.0
DSA for 3 researchers (10days/time, 3times)		2,700.0		0.0	2,700.0
DSA for local people (3 pers., 3 places, 4 days, 3times)		1,620.0		0.0	1,620.0
Rent boat		2,400.0		0.0	2,400.0
Equipment kit, materials, supplies		2,160.0			2,160.0
Analysis seagrass and sediment samples		1,500.0		1,500.0	3,000.0
Herbarium (voucher specimen)		540.0		0.0	540.0
Annual report		300.0		0.0	300.0
Local transport (10 days/time, 3 times)		750.0		750.0	1,500.0
Miscellaneous		450.0		450.0	900.0
2.2. Development of GIS database done by SEA START RC		2,000.0		2,000.0	4,000.0
3.1. Development of training materials for public awareness (100 posters, 1 CD video film, 1000 leaflets)					
3.1.1. Poster 100 copies		1,000.0			1,000.0
3.1.2. Video Film (1 original and 100 copies)		2,500.0		2,500.0	5,000.0
3.1.3. Leaflets 1,000 copies		1,000.0		1,000.0	2,000.0
3.2. Seminars for awareness enhancement					
3.2.1. Biodiversity & sustainable development for Policy makers at the Provincial level & Senior District Officials 4 days 20 people		3,380.0		700.0	4,080.0
Travel of official business (2 experts)		600.0			600.0
DSA for official business (2 experts, 4 days)		240.0			240.0
DSA for 20 participants, 4 days		1,200.0		0.0	1,200.0
Lectures (2)		400.0		0.0	400.0
Training room		300.0		300.0	600.0
Equipment for presentations		240.0		0.0	240.0
Local transport (4 days)		200.0		200.0	400.0
Miscellaneous		200.0		200.0	400.0
3.2.2. Biodiversity and sustainable use for Managers at the District level, border army, fisheries officers and local community representatives 2 meeting days 50 people		3,370.0		450.0	3,820.0
Travel of official business (2 experts)		600.0		0.0	600.0
DSA for 2 experts, 4 days		240.0		0.0	240.0
DSA for 50 participants, 2 days		1,500.0		0.0	1,500.0
Lectures (2)		400.0		0.0	400.0
Training room		150.0		150.0	300.0
Equipment for presentations		180.0		0.0	180.0
Local transport (2 days)		100.0		100.0	200.0
Miscellaneous		200.0		200.0	400.0
3.3. Study tours					
3.3.1. Study tours Apo (Philippines), Hon Mun & Con Dao National Park for coral reef component		8,900.0		200.0	9,100.0
International travel to Apo island, Philippine (5 pers., 1 time)		3,500.0		0.0	3,500.0
DSA for International visitors (5 pers., 7 days, 1 time)		2,100.0		0.0	2,100.0
Domestic travel to Hon Mun and Con Dao islands (5 pers., 2 places)		1,000.0		0.0	1,000.0
DSA for domestic visitors including accommodation (5 pers., 7 days, 2 places)		2,100.0		0.0	2,100.0
Miscellaneous		200.0		200.0	400.0
3.3.2. Study tours to Trikora (Indonesia) for seagrass component		4,900.0		300.0	5,200.0
International travel to Trikora, Indonesia (5 persons, 1 time)		2,500.0		0.0	2,500.0
International DSA (5 pers., 7 days)		2,100.0		0.0	2,100.0
Miscellaneous		300.0		300.0	600.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In - cash	In - kind	
3.4. Training professional skills					
3.4.1. Training on management project and professional skill for coral reef component and seagrass component (2 courses, 2 trainers, 8 trainees, 5 days/course).		6,290.0		850.0	7,140.0
	Travel for trainers (2 pers., 2 courses)	1,200.0		0.0	1,200.0
	DSA for trainers (2 pers., 5 days, 2 courses)	600.0		0.0	600.0
	Travel for trainees outside Phuquoc (4 pers., 2 courses)	800.0		0.0	800.0
	DSA for trainees (8 pers., 5 days, 2 courses)	1,200.0		0.0	1,200.0
	Boat hiring (4 days, 2 courses)	640.0		0.0	640.0
	Lecture preparation (2courses)	400.0		0.0	400.0
	Training room (2 courses)	300.0		300.0	600.0
	Equipment for presentations (5 days, 2 courses)	600.0		0.0	600.0
	Local transport (5 days, 2 courses)	250.0		250.0	500.0
	Miscellaneous (2 courses)	300.0		300.0	600.0
3.4.2 Training on English Foreign Language		3,900.0		3,900.0	7,800.0
	Payment for special trainers in English (3months/course, 2 courses)	3,000.0		3,000.0	6,000.0
	Studying materials	600.0		600.0	1,200.0
	Miscellaneous	300.0		300.0	600.0
3.4.3. Financial management training for sub-demosite community		1,880.0		500.0	2,380.0
	Travel for expert (2 pers., 1 time)	600.0		0.0	600.0
	DSA for expert (2 pers., 1 time, 4 days)	240.0		0.0	240.0
	DSA for local participants (5 pers., 1 time, 4 days)	300.0		0.0	300.0
	Training room (4 days, 1 time)	300.0		300.0	600.0
	Equipment for presentations (4 days, 1 time)	240.0		0.0	240.0
	Miscellaneous	200.0		200.0	400.0
4.1. Meetings with provincial authorities and private sectors for familiarisation with the project, environmental impacts of human activities and Regulations regarding on waste disposal from tourist facilities coral reef and seagrass habitats					
4.1.1 Meetings with provincial authorities and private sectors for familiarisation with the project, environmental impacts of human activities and regulations regarding on waste disposal from human activities to coral reef and seagrass habitats		6,420.0	7,020.0		13,440.0
	Travel for experts (2 pers., 4 times)	1,200.0	1,200.0		2,400.0
	DSA for experts (2 pers., 4 times, 4 days)	480.0	480.0		960.0
	Travel for officers outside Phuquoc (5 pers., 4 times)	1,000.0	1,000.0		2,000.0
	DSA for officers (5 pers., 4 times, 4 days)	1,200.0	1,200.0		2,400.0
	DSA for provincial participants (20 pers., 4 times, 2 days)	1,200.0	1,200.0		2,400.0
	Meeting room hiring (2 days, 4 times)	300.0	900.0		1,200.0
	Equipment for presentations (2 days, 4 times)	240.0	240.0		480.0
	Local transport (2 days, 4 times)	200.0	200.0		400.0
	Miscellaneous	600.0	600.0		1,200.0
4.1.2. Meetings with districtial authorities and fishermen for enhancing environment knowledge (4 times * 30pers)			5,000.0		5,000.0
4.2. Reforestation					
4.2.1. Reforestation by Phuquoc National Park			129,000.0		129,000.0
4.3. Training for crews, especially for fishing boat captains			75,000.0		75,000.0
4.3.1. Training for crews, especially for fishing boat captains on the environment regulation and laws of central/local governments and fishermen's duties and responsibilities (500 people/year; 3 years; 30\$/per)			45,000.0		45,000.0
4.3.2. Printing leaflets, poster, brochures, handbooks, related to activities on Marine for trainees (500 people/year; 3 years; 20\$/per.)			30,000.0		30,000.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In - cash	In - kind	
5.1. Management plan of sub demosite for coral reefs involving local stakeholders					
5.1.1. Management plan of sub demosite for coral reef involving local community, stakeholders		4,370.0		790.0	5,160.0
Travel for experts (2 pers., 1 time)		600.0		0.0	600.0
DSA for experts (2 pers., 1 time, 3 days)		180.0		0.0	180.0
Travel for participants outside Phuquoc (10 pers., 1 times)		1,000.0		0.0	1,000.0
DSA for provincial participants (20 pers., 1 times, 3 days)		1,800.0		0.0	1,800.0
Meeting room hiring (3 days, 1 times)		300.0		300.0	600.0
Equipment for presentations (3 days, 1 time)		90.0		90.0	180.0
Local transport (4 days, 1 times)		100.0		100.0	200.0
Miscellaneous		300.0		300.0	600.0
5.1.2. Coral reef biophysical surveys in detail for zoning & regulation preparation		10,300.0		700.0	11,000.0
Travels for researchers (5 pers.)		1,500.0		0.0	1,500.0
DSA for researchers (5 pers., 10 days)		1,500.0		0.0	1,500.0
DSA for local participants (2 pers., 10 days)		300.0		0.0	300.0
Boat hiring for biophysical surveys (10 days)		800.0		0.0	800.0
Equipment hiring (5 sets, 10 days)		500.0		500.0	1,000.0
Coral reef sample analysis (macro-samples)		3,000.0		0.0	3,000.0
Analysing and reporting (5 sub-reports, 10 days)		2,000.0		0.0	2,000.0
Map of zonation		500.0		0.0	500.0
Miscellaneous		200.0		200.0	400.0
5.1.3. Discussion review and agreement of zoning plan by stakeholders		3,500.0		3,500.0	7,000.0
Workshops at provincial and local levels on zonation and regulations		3,500.0		3,500.0	7,000.0
5.1.4. Approval of zoning plan by the appropriate authorities		3,500.0		3,500.0	7,000.0
5.1.5. Zoning/demarcation (bouy setting)		3,000.0		3,000.0	6,000.0
5.1.6. Participatory preparation of regulations regarding agreed uses within coral reef zones		4,050.0		250.0	4,300.0
Travel for experts (2 pers., 1 time)		600.0		0.0	600.0
DSA for 2 experts in field trip and in meeting (5 days)		300.0		0.0	300.0
Writing reports (2 pers., 7 days)		280.0		0.0	280.0
Travel for participants outside Phuquoc (10 pers., 1 time)		1,000.0		0.0	1,000.0
DSA for participants outside Phuquoc (10 pers., 4 days, 1 time)		1,200.0		0.0	1,200.0
DSA for participants in Phuquoc (10 pers., 2 days, 1 time)		300.0		0.0	300.0
Meeting room hiring for regulation discussion and evaluation		150.0		150.0	300.0
Equipment for presentations		120.0		0.0	120.0
Miscellaneous		100.0		100.0	200.0
5.1.7. Enforcement & surveillance with involvement of local community (patrol, allowance, boat,...)		17,200.0		5,600.0	22,800.0
DSA for enforcement staff (2 pers., 20 months)		4,000.0		4,000.0	8,000.0
Hiring a part of local house for guard station (20 months)		600.0			600.0
Boat hiring and enclosed things for enforcement implementation (20 months)		8,000.0		0.0	8,000.0
Petrol (300 litres/month x 20 months)		3,000.0		0.0	3,000.0
Miscellaneous		1,600.0		1,600.0	3,200.0
5.1.8. Guideline for sustainable uses (fishing, tourism), fisheries promotion and awareness raising on CR		4,340.0	4,340.0		8,680.0
Travel for experts (2 pers., 2 time)		600.0	600.0		1,200.0
DSA for experts (2 pers., 4 days, 2 time)		240.0	240.0		480.0
Travel for MBs (2 pers., 2 time)		200.0	200.0		400.0
DSA for MBs (2 pers., 4 days, 2 time)		240.0	240.0		480.0
DAS for meeting (10 people, 2 days, 2 times)		300.0	300.0		600.0
Designing and writing		300.0	300.0		600.0
Leaflet, poster, guider book		2,000.0	2,000.0		4,000.0
Meeting room hiring (2 days, 2 time)		300.0	300.0		600.0
Miscellaneous		160.0	160.0		320.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In - cash	In - kind	
5.1.9. Rehabilitation trial of coral reefs at a damaged reef at An Thoi island		8,380.0		150.0	8,530.0
Travel for experts (2 pers., 1 time/year, 2 years)		1,200.0			1,200.0
DSA for experts (2 pers., 7 days/time, 1 time/year, 2 years)		840.0			840.0
Travel for MB (1 per., 1 time/year, 2 years)		200.0			200.0
DSA for MB (1 per., 7 days, 1 time/year, 2 years)		420.0			420.0
DSA for local people (5 pers, 7 days, 1 time/year, 2 years)		1,050.0			1,050.0
Materials for transplanting corals		2,000.0			2,000.0
Equipment (buoys and shaped staples)		1,000.0			1,000.0
Boat hiring (7 days, 1 times/year, 2 years)		1,120.0			1,120.0
Reporting (1 report/year)		400.0			400.0
Miscellaneous		150.0		150.0	300.0
5.2. Management plan of sub demosite for seagrass beds involving local stakeholders					
5.2.1. Management plan of sub demosite for seagrass involving local community, stakeholders		2,640.0		400.0	3,040.0
Travel for experts (2 pers., 1 time)		600.0		0.0	600.0
DSA for experts (2 pers., 1 time, 4 days)		240.0		0.0	240.0
Travel for 2 officers and 3 MBs (5 pers., 1 time)		500.0		0.0	500.0
DSA for 2 officers and 3 MBs (5 pers., 4 days)		600.0		0.0	600.0
DSA for local participants (10 pers., 1 time, 2 days)		300.0		0.0	300.0
Meeting room hiring (2 days)		150.0		150.0	300.0
Transport for meeting (4 days)		100.0		100.0	200.0
Miscellaneous		150.0		150.0	300.0
5.2.2. Seagrass biophysical surveys in details for zoning & regulation preparation		6,965.0		375.0	7,340.0
Travel for 3 researchers		900.0		0.0	900.0
DSA for 3 researchers, 7days		630.0		0.0	630.0
DSA for provincial participants (2 pers., 7 days)		210.0		0.0	210.0
Rent boat (7 days)		560.0		0.0	560.0
Diving Equipments (4 sets, 7 days)		840.0		0.0	840.0
Analysis biological samples (seagrasses, benthos and fishes)		2,250.0		0.0	2,250.0
Analysing and reporting (5 sub-reports, 7 days)		700.0		0.0	700.0
Map of zonation		500.0		0.0	500.0
Local transport (7 days)		175.0		175.0	350.0
Miscellaneous		200.0		200.0	400.0
5.2.3 Discussion review and agreement of zoning plan by stakeholders		3,500.0		3,500.0	7,000.0
Workshops at provincial and local levels on zonation and regulations		3,500.0		3,500.0	7,000.0
5.2.4 Approval of zoning plan by the appropriate authorities		3,500.0		3,500.0	7,000.0
5.2.5. Zoning/demarcation (bouy setting)		3,500.0		3,500.0	7,000.0
Design and establish buoys		3,500.0		3,500.0	7,000.0
5.2.6. Participatory preparation of regulations regarding agreed uses within seagrass zones		4,330.0		410.0	4,740.0
Travel for experts (2 pers., 1 time)		600.0		0.0	600.0
DSA for experts (2 pers., 7 days, 1 time)		420.0		0.0	420.0
Writing reports (2 pers., 7 days)		280.0		0.0	280.0
Travel for leaders outside Phuquoc (10 pers., 1 time)		1,000.0		0.0	1,000.0
DSA for leaders outside Phuquoc (10 pers., 4 days, 1 time)		1,200.0		0.0	1,200.0
DSA for participants in Phuquoc (10 pers., 2 days, 1 time)		300.0		0.0	300.0
Meeting room hiring for regulation discussion and evaluation		150.0		150.0	300.0
Equipment for presentations		120.0		0.0	120.0
Miscellaneous		260.0		260.0	520.0
5.2.7. Enforcement & surveillance with involvement of local community (patrol, allowance, boat,...)		16,850.0		5,250.0	22,100.0
DSA for enforcement staff (2 pers., 20 months)		4,000.0		4,000.0	8,000.0
Hiring a part of local house for guard station (20 months)		600.0			600.0
Boat hiring and enclosed things for enforcement implementation (20 months)		8,000.0		0.0	8,000.0
Petrol (300 litres/month x 20 months)		3,000.0		0.0	3,000.0
Miscellaneous		1,250.0		1,250.0	2,500.0

Table 3 continued Detailed Budget with Description.

Sub-component/ Activities	Budget (in \$US)	GEF	Co - Funding		Total
			In - cash	In - kind	
5.2.8. Guideline for sustainable uses (fishing, tourism), fisheries promotion and awareness raising on SG		3,160.0	3,160.0		6,320.0
Travel for experts (2 pers., 2 time)		600.0	600.0		1,200.0
DSA for experts (2 pers., 3 days, 2 time)		180.0	180.0		360.0
Travel for MBs (2 pers., 2 time)		200.0	200.0		400.0
DSA for MBs (2 pers., 3 days, 2 time)		180.0	180.0		360.0
DAS for Meeting (10 related people, 2 days, 2 times)		300.0	300.0		600.0
Designing and writing		300.0	300.0		600.0
Leaflet, poster, guider book		1,000.0	1,000.0		2,000.0
Meeting room hiring (2 days, 2 time)		300.0	300.0		600.0
Miscellaneous		100.0	100.0		200.0
5.2.9. Rehabilitation trial of seagrass at a damaged area (1,000 m2) in Ham Ninh		8,940.0		690.0	9,630.0
Travel for experts (3 pers., 1 time/year, 2 years)		1,800.0		0.0	1,800.0
DSA for experts (3 pers., 7 days/time, 1 time/year, 2 years)		1,260.0		0.0	1,260.0
Travel for MB (1 per., 1 time/year, 2 years)		200.0		0.0	200.0
DSA for MB (1 per., 7 days, 1 time/year, 2 years)		420.0		0.0	420.0
DSA for local people (5 pers, 7 days, 1 time/year, 2 years)		1,050.0		0.0	1,050.0
Preparing seagrass for planting; and collecting seeds		2,000.0		0.0	2,000.0
Equipment (buoys and shaped staples)		500.0		500.0	1,000.0
Boat hiring (7 days, 1 times/year, 2 years)		1,120.0		0.0	1,120.0
Reporting (1 report/year, 2years)		400.0		0.0	400.0
Miscellaneous		190.0		190.0	380.0
6.1. Analysis of present uses, value, net come and costs & 6.2. Analysis of potential future uses, value, net come and costs		3,940.0		660.0	4,600.0
Travel for socio-economic surveyors (2 pers., 1 time)		600.0		0.0	600.0
DSA for socio-economic surveyors (2 pers.,10 days)		600.0		0.0	600.0
Travel for MBs (2 pers., 1 time)		200.0		0.0	200.0
DSA for MBs (2 pers.,10 days)		600.0		0.0	600.0
Boat hiring for socio-economic surveys (3 days x 2 groups)		480.0		0.0	480.0
Local transport (10 days, 2 groups)		500.0		500.0	1,000.0
Reporting (2 sub-demo, 10 days, 2 pers.)		800.0		0.0	800.0
Miscellaneous		160.0		160.0	320.0
6.3. Identification of present threats and potential change in threats resulting from alternative new uses & 6.4. Establishment of financial management frameworks & 6.5. Establishment of financial management mechanisms		3,700.0		660.0	4,360.0
Travel for researchers (2 pers., 1 times)		600.0		0.0	600.0
DSA for researchers (2 pers.,10 days, 1 times)		600.0		0.0	600.0
Travel for MBs (2 pers., 1 time)		200.0		0.0	200.0
DSA for MBs (2 pers.,10 days, 1 times)		600.0		0.0	600.0
Boat hiring for researchers (4 days, 2 groups,1 times)		640.0		0.0	640.0
Local transport (10 days, 2 groups, 1 times)		500.0		500.0	1,000.0
Reporting (2 sub-demo, 10 days, 1 pers.)		400.0		0.0	400.0
Miscellaneous		160.0		160.0	320.0
Grand Total		365,000.0	223,520.0	145,570.0	734,090.0

ARRANGEMENT FOR COORDINATION AND MANAGEMENT

The demonstration site project will be implemented by Department of Natural Resources and Environment (DoNRE) under authorization of Kien Giang Provincial People's Committee (PPC). This agency signs MoU directly with the PCU of the UNEP GEF Project "*Reversing Environment Degradation Trends of the South China Sea and Gulf of Thailand*". The Institute of Oceanography in Nha Trang and Hai Phong as Specialized Executing Agencies (SEAs) for coral reefs and seagrass sub-components will be co-ordinating body to develop relationship among regional, national, provincial and site levels. Project Steering Committee was established with leadership of PPC and supported by Management Advisory Group (MAG) with participation of legal, economic, marine ecologist experts, tourist sector and local communities. Project Management Board (PMB) includes leaders and staff of DoNRE and also Site Manager. Besides, the role of Department of Fisheries should be considered due to its important role in project implementation.

1. Project Steering Committee (PSC)

PSC is a steering agency to help the Kien Giang Provincial People's Committee (PPC) and the National Focal Point (VEPA) in working with the project. The National Focal Points of coral reefs and seagrass beds were invited to be the PCS members. Standing office of PSC is located at DoNRE (1126A, Nguyen Trung Truc, Rach Gia Town, Kiengiang province). PSC use the stamp of PPC of Kien Giang province (for the Chair of Committee) and that of DoNRE (for the Standing Deputy Chair) to work.

Functions and responsibilities of PSC:

Consider, decide and submit to PPC for getting approval of project implementation of the Project Demonstration Site including detailed activities and budget. Study and propose to PPC in the participation of related stakeholders in order to maintain the sustainability of the project. Assist PPC in performing foreign relations related to project implementing process. Supervise project management and speed up reporting on time as requirement the PSC and the Project Coordinating Unit (PCU). The PSC 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. PSC works on consensus principle.

PSC works according to allotting responsibilities, in concurrent charges. The PSC members are as follows:

1. Mr. Van Ha Phong, Vice Chairman of Provincial People's Committee, Chairperson
2. Mr. Do Manh Dong, Director of DoNRE, Standing Deputy Chairperson.
3. Mr. Pham Dinh Don, Vice-Director, Department of West-southern Environment Protection, Viet Nam Agency of Environment Protection, Deputy Chairperson.
4. Mrs. Nguyen Ngoc Phuong, Deputy Director of Department of Fisheries, member
5. Representative of, Institute of Oceanography, member
6. Representative of, Hai Phong Sub-Division of Oceanography, member
7. Mr. Phung Van Thanh, Deputy Director of Department of Science and Technology, member
8. Mr. Tran Quang Cui, Deputy Director of Department of Agriculture and Rural Development, member
9. Mrs. Vo Thi Van, Deputy Director of DoNRE, member
10. Colonel Tran Ngoc Hai, Deputy Director of Provincial Police, member
11. Colonel Huynh Thanh Van, Deputy Commander of Provincial Border Army, member
12. Mr. Chau Minh Tam, Acting Director of Department of Commerce-Tourism, member
13. Mr. Hoang Trung, Deputy Director of Department of Planning and Investment, member
14. Mr. Nguyen Van Tuoi, Deputy Director of Department of Finance, member
15. Mr. Bui Hung Dung, Deputy Head of Committee for Border Affairs, member
16. Mr. Pham Quang Binh, Director of Phu Quoc National Park, member
17. Mr. Le Hoang Khai, Chief, Fisheries Resource Protection Sub-Department, member
18. Mr. Nguyen Duc Kinh, Deputy Chairman, Phu Quoc People's Committee, member

2. Project Management Board (PMB)

PMB is a body to manage the project and under supervision of PSC. It has its own stamp and is able to open an account at the Foreign Trade Bank of Kien Giang province with the working office in DoNRE of Kiengiang (1226A, Nguyen Trung Truc St, Rach Gia town, Kiengiang province.) It is responsible to prepare a plan to be submitted to PSC for consideration and decision before submitting to get approval from PPC and to manage project activities as well as periodically to report substantive results and implementing progress to the PSC, Viet Nam seagrass beds and coral reefs SEAs and the PCU.

PMB also makes reviews and approvals of the stakeholder analysis, and financial plans regarding the generation of revenue streams; Develop and implement work plan for the site designed to result in financial independence and sustainability following expenditure of the GEF grant funds; Develop and implement the management plan for the site for approval; Review proposals for the harmonization of existing legislation regarding conservation and sustainable use of coral reefs and seagrasses; Provide financial control and oversight of inputs and expenditures in accordance with the approved business plan; Approve the program of public awareness, education and training activities, and publish appropriate educational and awareness materials; Approve the proposed program of activities that will be provided at the site for exchange personnel over a defined time frame of six months; Timely report to PSC, the SEAs of coral reefs and seagrass sub-components, the PCU, and Liaison on operational matters regarding co-ordination of actions in Viet Nam and Cambodia.

The project management board includes:

1. Mrs. Vo Thi Van, Deputy Director of DoNRE, Project Manager
2. Mr. Doan Huu Thang, Deputy Chief of Environment Office, DoNRE, Project Assistant Manager
3. Mr. Nguyen Xuan Niem, Site Manager
4. Mr. Do Nhat Hoa, Project Accountant
5. Mrs. Thi Kim Dao, Project Cashier

Specifically the Demonstration Site Manager shall take responsibility for:

- Executing the work plan according to the timetable presented in work plan of this document taking into account any amendments that shall be agreed by PSC 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 schedule of expenditures, initially defined by the demonstration site proposal and amended from time to time by the management body;
- Reporting on activities and outcomes, to the PSC, the focal points of the SEAs, 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 PCU, through the focal point of the responsible SEA;
- Preparing and submitting to the PCU, with supervision of the focal points of the SEAs, 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.

3. Management Advisory Group (MAG)

In addition to the Project Management Board, Management Advisory Group shall be formed under decision of PPC to consider and resolve issues of policy regarding the management and sustainable use of coral reefs and seagrasses in Kien Giang province in general and in Phu Quoc islands in particular.

Membership, The members of MAG shall consist of:

1. Kien Giang PPC Chairperson
2. Director of DoNRE
3. Director of Department of Fisheries
4. Expert of Institute of Oceanography
5. Expert of Hai Phong Sub-Institute of Oceanography
6. Specialist, Sub-Department of West southern Environment Protection
7. Director of Department of Agriculture and Rural Development
8. Director of Phu Quoc National Park, member
9. Chief, Fish Resource Protection Sub-Department
10. Chairman, Phu Quoc People's Committee
11. Representatives from Mass Organisations
12. Representatives from NGOs
13. Representatives from tourist sector
14. Representatives from private businesses
15. Representatives from local communities

Functions

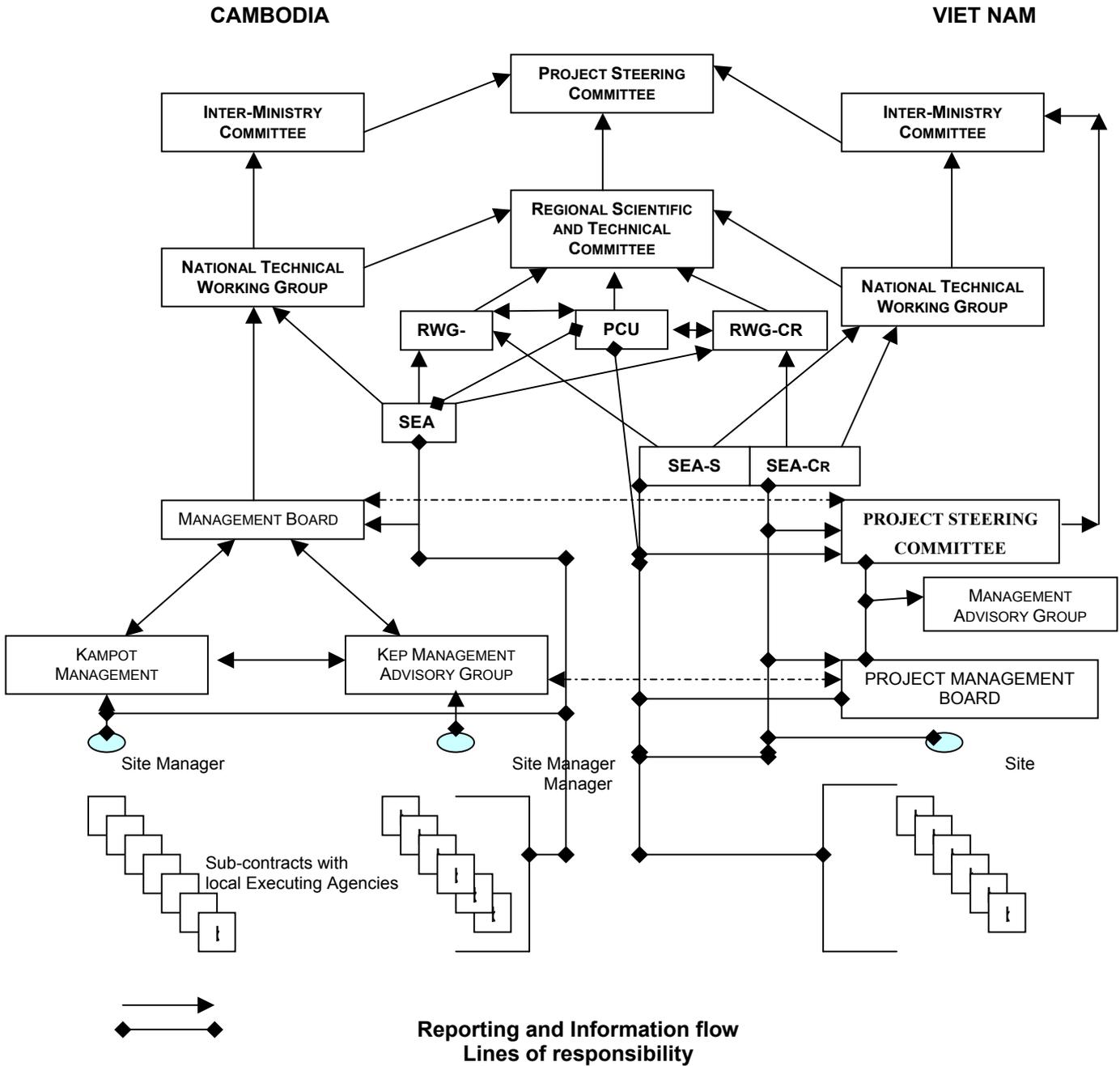
The primary function of the Management Advisory Group is to provide a forum for discussion and decision regarding matters of policy affecting the sustainable use of coral reefs and seagrasses in Phu Quoc Islands and to provide a vehicle for the provision of support to the implementation of the agreement regarding joint actions to manage coral reefs and seagrasses between Kien Giang province of Viet Nam and Kampot Province of Cambodia.

4. Department of Fisheries

The Kien Giang Department of Fisheries is a professional agency belonging to PPC, advises and supports PPC in implementing state managerial functions on local fisheries including: aquaculture, exploitation, sea products processing, fisheries protection and development of marine and inland resources. It's address is 05, Dinh Tien Hoang, Rach Gia town, Kiengiang. Tel: 84 77 862048. Fax: 84 77 869608. The department plays very important role in the Demonstration Site Project because it's responsibility related to marine resource management authorised by the Government. Under it's agencies, Sub-department of Fisheries Protection and Fisheries Extension Center shall contribute actively in enforcement and development of sub-demo site management models as well as fisheries promotion.

CHART OF MANAGEMENT FRAMEWORK

REGIONAL CO-ORDINATION



Notes for Viet Nam side:

Project Steering Committee meets once per year - Policy & Planning

Advisory Committee meets once per year

Management Board meets at least every quarter and operates project daily activities

Cambodian Management Board and Viet Nam Project Steering Committee meet jointly once per year

Cambodian Management Advisory Groups and Viet Nam Management Board meeting jointly once per year

PCU to facilitate joint meetings between the countries, NTFP from each country to participate

Viet Nam Project Steering Committee to be chaired by Vice-Chair of the Provincial People's Committee