

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT DOCUMENT

TITLE	MANAGEMENT OF THE EMERALD TRIANGLE PROTECTED FORESTS COMPLEX TO PROMOTE COOPERATION FOR TRANSBOUNDARY BIODIVERSITY CONSERVATION BETWEEN THAILAND, CAMBODIA AND LAOS (PHASE II)
SERIAL NUMBER	PD 289/04 Rev.1 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENTS OF THAILAND AND CAMBODIA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

The Project Phase II Proposal is jointly proposed by the participating countries after completion of the "*Management of the Phatam Protected Forests Complex to Promote Cooperation for Transboundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase I)*" or ITTO Project PD 15/00 Rev.2 (F). This submission is a response to the results of the 3rd PSC meeting held in Bangkok on November 23, 2003. The Project Phase II is proposed for 2 years (2005-2006). The development objective of the project is to conserve trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex situated between Thailand, Cambodia and Lao PDR in a framework of trans-boundary biodiversity conservation area (TBCA). Specific objectives are (1) to strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation areas, (2) to enhance protection and monitoring of the biological resources along tri-national borders, and (3) to strengthen the involvement of local communities and stakeholders in sustainable uses and management of natural resources both in inlaved communities and in the buffer zones. The Phase II will extend lesson learned of the Project Phase I and activities to be implemented in Cambodia and Laos, while Thailand will focus on implementation of planned biodiversity conservation activities. Among the projects most important outputs will be strengthened cooperation among the three countries on TBCA, increased human resource capacity in biodiversity conservation and management, integrated conservation and development programs in the buffer zone and nature-based tourism packages to increase livelihood of local residents and alleviate local poverty.

EXECUTING AGENCY Royal Forest Department (main agency) (Thailand)
Forestry Administration (Cambodia)

COOPERATING GOVERNMENTS —

DURATION 24 MONTHS

APPROXIMATE STARTING DATE TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE	Source	Contribution in US\$	Local Currency Equivalent
	<u>Implement in Thailand</u>		
	ITTO	352,879	
	Gov't of Thailand	323,400	
	<u>Implement in Cambodia</u>		
	ITTO	335,329	
	Gov't of Cambodia	540,335	
	ITTO Total	688,208	
	GRAND TOTAL	1,551,943	

ABBREVIATIONS

ADB	: Asian Development Bank
BPP	: Border Patrol Police
CALM	: Establishing Conservation Areas through Landscape Management
CAT	: Cat Action Treasury
CBD	: Convention on Biological Diversity
CITES	: Convention on International Trade in Endangered species of Wild Fauna and Flora
CLDP	: Community Livelihood Development Program
CPC	: Cooperation Planning Committee
CTA	: Chief Technical Advisor
DoNP	: National Park, Wildlife and Plant Conservation Department
FA	: Forestry Administration
FAO	: Food and Agriculture Organization
GIS	: Geographic Information System
GPS	: Global Positioning System
HQ	: Headquarters
ICDP	: Integrated Conservation and Development Program
ITTO	: International Tropical Timber Organization
IUCN	: The World Conservation Union
MoE	: Ministry of Environment
KUFF	: Kasetsart University Faculty of Forestry
MAFF	: Ministry of Agriculture, Forestry and Fishery
MIS	: Management Information System
MRC	: Me Kong River Commission
NBCA	: National Biodiversity Conservation Area
NESDP	: National Economic and Social Development Plan
NGOs	: Non-Government Organizations
NP	: National Park
OEPP	: Office of Environment Policy and Planning
PM	: Project Manager
PAs	: Protected Areas
PPFC	: Phatam Protected Forests Complex
PSC	: Project Steering Committee
PVPF	: Preah Vihear Protected Forest
RFD	: Royal Forest Department
RGC	: Royal Government of Cambodia
TA	: Technical Advisor
TFSMP	: Thai Forestry Sector Master Plan
TBCA	: Trans-boundary Biodiversity Conservation Area
WEFCOM	: Western Forest Complex Ecosystem Management Project
WCS	: Wildlife Conservation Society
WS	: Wildlife Sanctuary

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PART I: CONTEXT

1. Origin

With the financial assistance from the International Tropical Timber Organization (ITTO), the Royal Forest Department (RFD) of Thailand has initiated trans-boundary biodiversity conservation area (TBCA) and selected the Phatam Protected Forests Complex (PPFC) as a pilot project because there is an increasing pressure on biodiversity from trade in plants and animals across the border with Cambodia and Laos (ITTO/RFD, 2000). The *"Management of the Phatam Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase I)"* or ITTO Project PD 15/00 Rev.2 (F) was for three years (2001-2003). Specific objectives of the Project Phase I were to start a management planning process for the PPFC in a framework of trans-boundary biodiversity conservation and to initiate cooperation between Thailand, Cambodia, and Laos. These activities were directed toward a long-term management plan and a working plan.

The PPFC is located in Ubon Ratchathani Province in northeast Thailand (Map C-1). This complex comprises five protected areas in Thailand, including the Phatam National Park, Kaeng Tana National Park, Phu Jong-Na Yoi National Park and Yot Dom Wildlife Sanctuary as well as Bun Thrik-Yot Mon Proposed Wildlife Sanctuary. To the east of the PPFC are the Me Kong River and Phouxeingthong National Biodiversity Conservation Area (NCBA) in Laos, and to the south is the Protected Forest for Conservation of Genetic Resources of Plants and Wildlife in Preah Vihear Province, Cambodia. See more details in Annex A.

Two important outputs derived from the project phase I were a long-term management plan of the PPFC in the framework of trans-boundary biodiversity conservation (Annex B), and initiative cooperation between Thailand, Cambodia and Lao PDR at decision-makers (tri-partite commission) and protected area staff (joint task-force). It is found that the cooperation was achieved at certain level due to some uncertainty situations and most activities were implemented in Thailand (PPFC, 2004). In addition, the results of technical research showed that large wildlife species such as the wild elephant, banteng and tiger seasonally migrate across the border of the three countries and forest in buffer zone of Thailand's protected areas is being encroached for agricultural practices. Therefore, it is essential to reinforce this landscape conservation initiative and implement biodiversity conservation activities through the involvement of local residents in the buffer zone because protected areas alone are not sufficient to conserve biodiversity or sustain ecosystem services that human life depends on (Shappard, 2003; Gasana *et al.*, 2004). Moreover, cooperation among three countries to manage this contiguous forest as a single landscape planning unit and enhance protection measures is of important. The long-term management plan and 5-year action plan already provide guideline for implementation in a year to come.

Summary of project objectives and pending issues in Phase I and objectives of Phase II

Phase I (200-2004)		Phase II (2004-2005)
Objectives	Pending Issues	Objectives
1. Initiate cooperation among Thailand, Cambodia and Laos for transboundary biodiversity conservation	Cambodia and Laos took less part in project Phase I	1.Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective TBCA
2.Start a management planning process for Phatam Protected Forests Complex in the framework of TBCA	Waiting for implementation of Phase II	2.Enhance protection and monitoring of biological resources along tri-national borders
		3.Strengthen the involvement of local communities and stakeholders in sustainable uses of natural resources

The Project Steering Committee of the PPFC Project had a meeting on November 23, 2003 and agreed with the request of the Executing Agency under the leadership of the Director-General of the Royal Forest Department to formulate the project proposal for Phase II in order to build on the achievements of Project Phase I (PPFC, 2003). On January 7, 2004, the Executing Agency issued an official letter to the ITTO for assistant in formulating the Project Proposal for Phase II. The ITTO officially notified to the RFD on February 3, 2004 and suggested the Department to engage the GIS Consultant from Kasetsart University to assist the preparation of the project document for Phase II. Therefore, the RFD with the approval of the ITTO contracted the Forestry Research Center of the Kasetsart University Faculty of Forestry (KUFF) to develop this proposal on behalf on the Executing Agency. The draft proposals were circulated to concerned parties in Thailand, Cambodia and Laos for review and comment. In addition, tri-national workshop was conducted in Bangkok on April 1-3, 2004 to finalize the project proposal. Comments from delegations were incorporated in this final report.

It is noticed that the title of the Project Phase II Proposal is modified to "***Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase II)***" because it extends the implementation to cover protected forests in neighboring countries and the term "*Emerald Triangle*" or adjoining forest areas along the tri-national borders is already acknowledged by the cabinets of Thailand, Cambodia and Laos and the public.

Through this project proposal, Thailand, Cambodia and Lao PDR request the ITTO to provide additional financial support and limited technical assistant to implement planned biodiversity conservation activities and to extend TBCA activities in Cambodia and Lao PDR.

2. Sectoral Policies

2.1 National Conservation Policy

The proposed project is inline with the national conservation policy of each country as follows:

Thailand

The Constitution of the Kingdom of Thailand

The Thailand's Constitution enacted on the 11th October B.E. 2540 (1997) states that " *the state shall promote and encourage public participation in the preservation, maintenance and balanced exploitation of natural resources and biological diversity and in the promotion, maintenance and protection of quality of the environment in accordance with the persistent development principle as well as the control and elimination of pollution affecting public health, sanitary condition, welfare and quality of life*".

The National Economic and Social Development Plan (NESDP)

The Eight NESDP (1997-2001) aimed to protect 25% of total land area under conservation forest and 15% as the economic forest. Additionally, this project follows the management guidelines of the Ninth NESDP (2002-2006) which focuses on *improving management processes, based on transparency and public participation. Preservation and the sustainable use of resources will be promoted. A holistic management approach will be adopted for the development of river basins, as well as the rehabilitation of coastal environments, forest areas, and depleted soil resources.*

Thailand National Forest Policy

The Cabinet adopted the Thailand National Forest Policy on December 3rd, 1985. Key policy statements are as follows:

- Long-term guidelines for forest management and development shall be established to maximize national social and economic benefits as well as national security.
- Forty percent of the country area shall be kept under forests (25% *Protected Forest*" and 15% *Production Forest*").

Thai Forestry Sector Master Plan

The Thai Forestry Sector Master Plan (TFSMP) was formulated in 1993 (Royal Forest Department, 1993) which was endorsed by the National Forest Policy Committee. The TFSMP provides general guidelines for long-term forest development. Specifically, long term objectives for conservation of ecosystems and biodiversity are to conserve representative ecosystems and their biodiversity and to promote biodiversity conservation in land management practices.

National Park, Wildlife and Plant Conservation Department (DoNP)

The Department's mission is related to the conservation, promotion and rehabilitation of degraded forest, flora and fauna in conservation forest by controlling and protecting the remaining forest cover and rehabilitating degraded forests through the involvement of local communities and raising awareness on conservation. In addition, the DoNP aims to maintain ecosystem balance and ecological processes, biodiversity, head watershed and wildlife habitat, as well as people's food bank, and tourist attractions inside the forests

Cambodia

In 1993, the Royal Government of Cambodia (RGC) decreed the "National Protected Areas System" to conserve biodiversity, following the Rio Summit. In November that year, His Majesty King Norodom Sihanouk issued a decree designating 23 areas covering 33,272 sq. km as 7 national parks, 10 wildlife sanctuaries, 3 protected landscapes, and 3 multiple use areas.

Further to this Declaration, RGC canceled 12 forest concessions contracts in 1999, for a total area of 2.3 million ha. In 2002, the RGC established the Monduliri Protected Forest (429,438 ha), the Cardamom Protected Forest (401,313 ha), and the Preah Vihear Protected Forest (190,027 ha).

A new forest law was enacted by the RGC in 2002 and implementing regulations are now being developed. The new forest law contains provisions on community forests and wildlife protection. A new wildlife law and protected species list are currently in the process of being finalized.

In addition to these national legal instruments, Cambodia is party to the Convention on Biological Diversity since 1995. Donors are financing a number of projects to support the above reforms undertaken by RGC. Being a member of ASEAN, Cambodia is a party to the "ASEAN Agreement on the Conservation of Nature and Natural Resources". Cambodia has also become a party to CITES and is actively implementing its provisions.

The FA/MAFF is responsible for the management of the forest areas outside *MOE-administered* protected areas, including the management of *the three new protected forests*, flooded forest and coastal mangrove areas. At the provincial level, there are forestry offices under the authority of the provincial director of Agriculture, Forestry and Fisheries. The Ministry of Environment, through its Department of Nature Conservation and Protection, is responsible for some protected areas. The armed forces and the police assist in law enforcement. *International Conservation NGO's are providing technical and financial support to MOE and MAFF conservation projects throughout Cambodia.*

Other legal frameworks developed after the mission's report related to forest management and biodiversity conservation in Cambodia are as follows:

- Declaration of Forestry Sector Reform (22 October 1998)
- The Forest Concession Management Sub-Decree was adopted in February 2000;
- The forest concession operations were suspended from 1st January 2002 (MAFF December 2001). All the operations in concession areas were stopped for undefined time period.
- The new Forestry Law was adopted & inaction in August 2002;
- Law on environment protection and natural resources management (December 1996)
- The Statement of the Royal Government of Cambodia on National Forest Sector Policy (July 2002).

- Codes of Practice for sustainable forest management were adopted and applied in operations.
- Forest concession performances were completely reviewed 1999/00 by DFW/ADB.

Internationally, the Cambodian has committed to 5 international conventions related to the environment as follows CBD (1996), FCCC (1996), Convention on Marine Pollution (MARPOL) in 1996, RAMSAR (1999) and CITES (1997).

Lao PDR

The remaining forest cover in Lao PDR is approximately 47% of country area. The Department of Forestry (DoF) and Department of Forest Resource Conservation, Ministry of Agriculture and Forestry are the main management authorities to manage forest resources and protected area system. However, biodiversity conservation efforts in Lao PDR have started in late 1980s. The first protected area, Se Pinae National Biodiversity Conservation Areas (NBCA) was legally established in 1993 under the Prime Ministerial Decree No. 164, and now there are 20 NBCAs and approximately 280 other types of conservation and protected forest areas at the provincial and district level, covering 14% of the country area (Galt *et al.*, 2000; Southammakhot, 2000).

Approximately 70% of the NBCAs are funded by international donors and significant progress is made in Dong Hua Sao, Phouxeiangthong and Phu Khao Khaouy NBCAs. In addition, Lao has formulated the national land use planning and allocation policy program to prioritize local community involvement within NBCAs and in an effort to stabilize shifting cultivation, improve agricultural extension and protect conservation forest.

In 1996, the National Assembly passed the Forestry Law, which set out the policy framework for all aspects of forestry including conservation forest and provision of zoning scheme in all NBCAs. In addition, regulations regarding wildlife and habitat protection and management of protected areas were recently completed. Cooperation between NBCA and military field staff is being developed in NBCAs which border sensitive international boundaries and army effectively reduces encroachment.

2.2 Conservation planning across boundaries

Bio-regional planning is a process of understanding a geographical area in terms of its natural systems and for identifying priorities for conservation and development actions (Miller and Hamilton, 1999). This planning approach has already been recognized and being implemented in protected areas system by Thailand, Laos and Cambodia in order to resolve fragmentation and edge effects. Recently, IUCN (2004) published the "*Regional Report on Protected Areas and Development*" and it was found that these three countries have initiated some activities related to bio-regional and/or landscape planning. They are summarized as follows:

The **Kingdom of Thailand** has a specific policy with regard to conservation of protected areas, and fully supports the project. More than 280 protected area units, covering approximately 18% of the country's land area are clustered into 19 complexes or regions nation-wide as a basis for planning and managing these forest complexes on an ecosystem basis. Besides the PPFC Project, this approach has been tested in the Western Forest Complex (WEFCOM) covering 17 contiguous protected areas. In January 2004, the Cabinet agreed with the Ministry of Natural Resources and Environment to collaborate with Myanmar for the second TBCA (Trisurat, 2004). Experience from the WEFCOM and PPFC Projects encourages the DoNP to extent the ecosystem approach to be implemented in Dong Phrayayen-Khao Yai Forest complex which embraces 6 protected areas.

In **Cambodia**, biodiversity management regions were used in the Biodiversity Action Plan Prospectus process as a mechanism for setting priorities for action among broad geographical regions, and then for defining within each region clusters of protected areas across shared landscapes which need priority attention. In addition, the Ministry of Environment is promoting bioregional and protected area cluster planning. In July 2002, the Cambodian Government established three new protected forests adjacent to existing protected areas, and has initiated an ecosystem management approach for these three landscape scale-protected areas. The

government now has steadily increasing budget support from international donor and has been increasing staff capacity to implement this approach effectively.

In *Lao PDR*, the 2003 National Biodiversity Strategy and Action Plan advocates a regional approach to planning and managing biodiversity which groups provinces to shared natural systems. Meanwhile, the National Forest Strategy strongly recommends a regional approach to forest management and currently the Vientiane Government has implemented a river basin for spatial planning as a pilot project to be applied systematically in other catchments. This project is supported by the Danish, ODA and ADB loan. Beside the PPFC Project, trans-boundary cooperation on protected area management and cross border trade of endangered species has occurred between Laos, China, and between Laos and Vietnam via the UNDP/WWF Sub-regional Biodiversity Conservation Forum Project.

At regional level, the Me Kong River Commission (MRC) is implementing the Me Kong Basin Development Plan using catchments of the Me Kong region as planning units. In 2003, the joint bilateral cabinet meeting between Thailand and Cambodia was held in Siemriep. Both governments have agreed to strengthen natural resources conservation in the Phnom Dong Rak Range along the boundaries of Thailand and Cambodia. Recently, the Minister of Natural Resources and Environment of Thailand met the Minister of Agriculture and Forestry of Cambodia during the 7th Conference of the Parties (COP) under the CBD in Kuala Lumpur. Both Ministers confirmed the initial commitment derived from the joint cabinet meeting and would like to implement this conservation policy on the ground. Also in March 2004, delegations of Thailand and Cambodia signed a Memorandum of Understanding (MOU) to develop and promote tourism package in both countries. Similarly, the joint cabinet meeting between Thailand and Laos was conducted on March 20, 2004 in Champasak and Ubon Ratchathani Provinces to strengthen bilateral cooperation on security, economic development and social aspect. The Government of Thailand presented a Visitor Center constructed in Pakse, Champasak to Lao PDR for promoting ecotourism along the tri-national borders, particularly in the *Emerald Triangle* (adjoining between Thailand, Cambodia and Laos). Thus, it is evident that terms such as ecosystem, catchment, river basin, bioregion and landscape planning have much common in this region.

3. Programs and Operational Activities

There are several programs and operational activities related to biodiversity conservation, protected areas and natural resources management being implemented at the national level with national and international funding support. This section will emphasize only international funded projects in three countries.

Thailand

International projects relevant to biodiversity conservation implemented in Thailand are as follows:

- ITTO Project PD 2/99 Rev. 2(F) Phase II: Establish a National Monitoring Information System for the Effective Conservation and Sustainable Management of Thailand's Forest Resources implemented throughout the country.
- ITTO Project PD 16/97 Ref. 3 (F): Integrated Buffer Zone Development for Sustainable Management of Tropical Forest Resources in Thailand implemented in the buffer zone of Kaeng Krachan National Park. The project objective is to achieve sustainability in the Kaeng Krachan Natural Resources and Environment Conservation Network.
- European Union (EU) Project in Phu Khieo-Phu Kradoeng-Phu Luang Forest is being implemented. The main objectives of this project are to conserve biodiversity and promote buffer zone management.
- Western Forest Complex Ecosystem Management Project or WEFCON (1999-2003), which supported capacity development at central and local levels for integrated ecosystem management of the 17 contiguous protected area units in western Thailand.
- Joint Management of Protected Areas Project funded by the Danish International Development Assistance (DANIDA) (2004-2008). It aims at promoting participatory approaches to protected areas management in securing both biodiversity conservation and improved livelihood of local communities.

Cambodia

Cambodia has three major landscape scale projects underway at this time:

- *UNDP/GEF Medium-size Project for the Northern Plain " Establishing Conservation Areas through Landscape Management" CALM*

The project addresses the problem of escalating biodiversity loss across the Northern Plains, caused by increasing human land and resource use. This is achieved through a seven-year, three-pronged approach: (1) the introduction of biodiversity considerations into provincial level land use processes; (2) the demonstration of specific mainstreaming interventions at four key sites; and (3) strengthen biodiversity management by government at the four key sites. The Landscape Species Approach has been used to identify the four sites, which include a protected forest, a wildlife sanctuary and other forestland categories. The project is being co-implemented by the Forest Administration (FA) of the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Department of the Nature Conservation and Protection (DNCP) of the Ministry of Environment (MoE) in partnership with Wildlife Conservation Society (WCS).

- *UNDP/GEF Medium-size Project for the Cardamom Mountains*

The Management of the Cardamom Mountains Range Project focuses on the consolidation of management activities in the region's three protected areas: the Central Cardamom Protected Forest (CCPF), the Phnom Aural and Phnom Samkos Wildlife Sanctuary (PSWS). The project aims to build national and local government capacity to manage the three areas, combined with sustainable development interventions designed to reduce pressure on the sites from local populations. The project is being co-implemented by the FA and the DNCP) in partnership with Conservation International (CI) and Fauna and Flora International (FFI) respectively.

- *East Asia and Pacific Environmental Initiative for Eastern Plain "Srepok Wilderness Area Project Alliance to Secure the Biodiversity and Livelihoods of Northeastern Cambodia" in combination with a UNDP/GEF Medium-size Project for the Eastern Plain.*

The Srepok Wilderness Area Project seeks to restore the once abundant population of large mammal species in the dry forest of northeastern Cambodia to level sufficient for a high-end ecotourism venture based on the South Africa model of "wildlife conservation through sustainable use". The purpose of the project is to both protect and restore biodiversity and also to support and secure sustainable community harvests and livelihoods. This combined project include a protected forest, two wildlife sanctuary, other land categories, including a potential trans-boundary component with Vietnam The project is being co-implemented by the FA and the DNCP in partnership with Wildlife Conservation Society (WWF) and Cat Action Treasury (CAT).

Lao PDR

After Lao PDR adopted the New Economic Mechanism in 1986, it began to open doors to the outside world during the 1990's. Along with private sectors investment came several international donors and NGOs interested in biodiversity conservation, especially after the Rio Summit and CBD was signed in 1992.

The two largest support programs for protected areas were the IUCN-implemented Conservation Sub-program of the Lao-Swedish Forestry Co-operation Program (LSFP) and the Global Environment Fund (GEF) through the World Bank for the Forest Management and Conservation Project (FORMACOP). The Netherlands/IUCN Biodiversity Conservation Project has also been active in the two NBCAs in the south. These three projects jointly prepared a manager's guidebook summarizing techniques used to implement Integrated Conservation and Development (ICAD) principles in Lao PDR. All three projects were completed in 2000.

PART II: THE PROJECT

1 Project Objectives

1.1 Development Objectives

The project will conserve trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex situated between Thailand, Cambodia and Lao PDR in a framework of trans-boundary biodiversity conservation area. Experiences from this project will be used as a model to others potential trans-boundary conservation areas in participating countries and in the lower Me Kong Basin.

1.2 Specific Objectives

1.2.1 Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation area

1.2.2 Enhance protection measures and monitoring of the biological resources along tri-national borders

1.2.3 Strengthen the involvement of local communities and stakeholders to ensure sustainable uses and management of natural resources both in enclaved communities and/or in the buffer zones

2. Justification

2.1 Problems to be addressed

Our target condition in the Emerald Triangle situated between Thailand, Cambodia and Laos is trans-boundary biodiversity. This condition can be described in terms of wild animal population and secured trans-boundary ecosystems. After completion of the PPFC Project Phase I, the Project faced a number of threats and challenges to its effectiveness and these obstacles should be addressed if the project is to meet its biodiversity, trans-boundary and socioeconomic objectives in the second phase.

International cooperation

The management of cross-border reserves requires a high degree of cooperation. However, the Project Management Team and consultants concluded that the Project Phase I can achieve level 2 of 5 of cooperation: Consultation (Sandwith *et al.*, 2001; PPFC Project, 2003). Laos is reluctant to nominate the Phuoxeingthong NBCA for inclusion in the TBCA as prior agreed in the 1st tri-national meeting on December 9, 2001 (PPFC, 2001). This may be due to most activities of the Project Phase I had been implemented mainly in Thailand; Cambodia and Laos took less part in the phase I. In addition, Laos may be afraid that the TBCA initiative will affect on-going commercial logging implemented along Thailand and Laos border which is the main foreign income. However, the results from wildlife survey clearly present that long-term survival of landscape species such as Asian elephant, gaur, banteng and tiger in this region require better cooperation and commitment among three countries to conserve trans-boundary biodiversity because these species seasonally migrate across tri-national borders (Bhumpakphan, 2003). Therefore, concrete cooperation and mutual understanding of the cross-boundary issues among three countries is significantly essential to save these landscape species in long run.

Forest encroachment and poaching

Forest in the buffer zone outside the PPFC has been encroached for unsustainable agriculture and the results from GIS analysis indicate that future forest-clearing could jeopardize the viability of rare large mammals living in this region. Moreover, wildlife is poached and wild plant is collected for trading along the border of the three countries, especially in Laos. The main demand for wildlife poaching is for bush meat, which is an important source of protein for rural households

(Trisurat, 2003a; 2003b). These problems are likely to continue in the future because local people have been using the biological resources for many years unless there are alternative activities to supplement their income. The existing annual household income of local residents in the PPFC buffer zone is US\$ 1,070 or one-third of the Ubon Ratchathani residents (Tanakajana, 2003). This situation is worst in rural areas in Laos and Cambodia.

In addition, combating illegal trading along the tri-national border is not effective due to there is only one CITES checkpoint along 11 border crossings (317 km) and Laos has yet ratified the CITES Convention.

Cattle grazing and forest fire

The intensity of cattle grazing in the PPFC, especially in Phatam and Kaeng Tana National Parks is influenced by the number of cattle owned by the herders who resides in approximately 80 communities around the PPFC (Bhumpakphan, 2003; Tanakajana, 2003). At the end of dry season, herders burn large tracts of grasslands to promote growth of new pasturage for their animals. In addition, local people collecting edible plant also burn dry dipterocarp forest to stimulate young shoot rejuvenation. Impact of forest fire on tropical biodiversity, especially deciduous forest is controversial issue. Scientific research finding is essential to present positive and negative impacts of forest fire and how to effectively manage deciduous forest.

Lack of resources and capacity

Cambodia and Laos both lack the capacity at all levels to manage their protected areas effectively. Protected area staffs at central and local levels have little or no access to training, budget for management are very limited, and there are few park rangers on the ground. This obstacle leads to ineffective patrolling and law enforcement on forest encroachment, illegal poaching and illegal trading along the border. Therefore, capacity building is another key issue to be addressed in the project phase II.

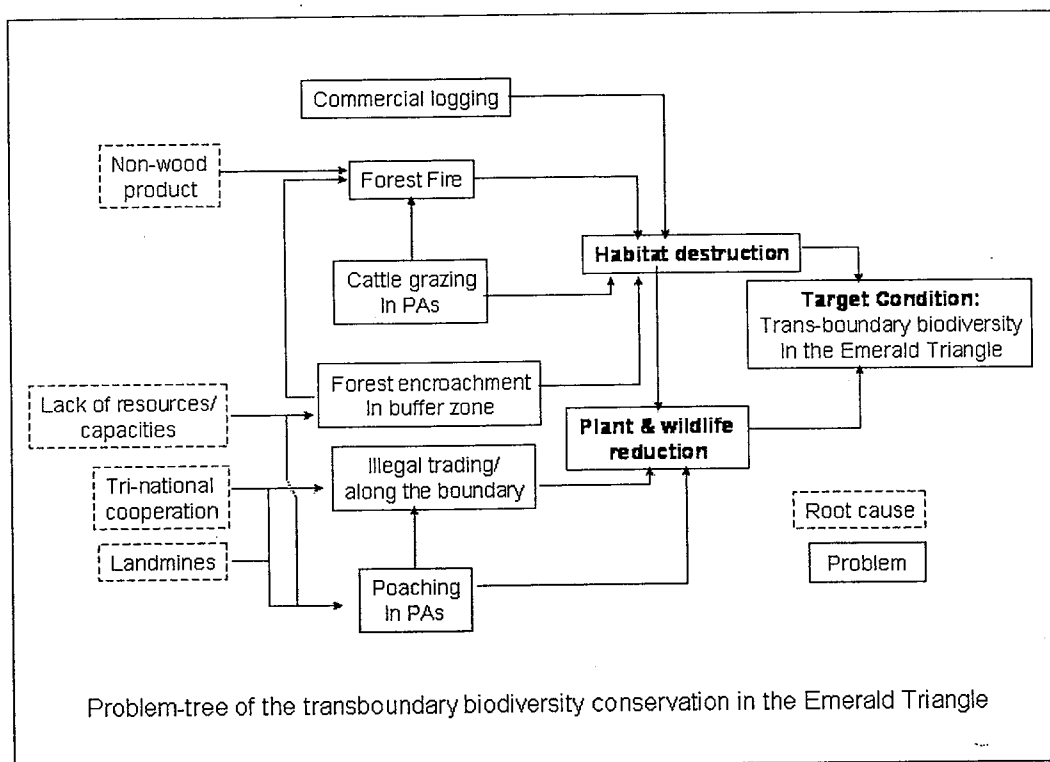
Landmines

Besides the human resource, thousands of landmines were laid along the borders between Thailand, Cambodia and Laos named as the Emerald Triangle in the early 1980s. Even though, Thailand with the assistance from Norway begins demining but this task requires large amount of money thus these still constitute a major threat to researchers and park rangers to conduct biodiversity survey and to patrol poaching, respectively. Thus, patrolling in this area requires collaboration with military who have experience in inspection of landmines.

2.2 Intended situation after project completion

The expected situation after the completion of the project phase II is the secured trans-boundary biodiversity conservation area that facilitates migration and long-term survival of large mammals in this region. This target situation will be accomplished through the following attributes:

- There will be a sound understanding and cooperation among the three countries for trans-boundary biodiversity conservation at the local and national levels.
- Livelihood of local communities will be improved and they will be more aware of trans-boundary biodiversity conservation issues and participate in integrated conservation and development activities.
- Systematic baseline data on ecology especially wide-range species along the tri-national border and socio-economic are available and shared by the three countries
- Park rangers of protected areas will be trained and gain more knowledge on protected area management
- Necessary tools for effective patrolling will be provided to park officials



2.3 Project strategy

The Project Document's Phase I proposed key activities for phase II (2002-2005) as follows:

"the first PPFC working management plan will focus on implementation of planned biodiversity conservation activities, including initial tri-national trans-boundary collaborative activities in areas that will be jointly identified in the first stage, initiation of a long term scientific research program, development of buffer zone activities for villages that are adjacent to PPFC, human resource development, ecotourism development and strengthening tri-national exchange mechanisms"

Considering the accomplishments of Project Phase I and the remaining issues to be addressed, the objectives of Phase II will be achieved through the following strategies:

Objective 1

- Use international agreements rectified by the three countries and persuade international communities such as ITTO, IUCN, and MRC to stimulate cooperation on trans-boundary conservation
- Given Laos is reluctant to participate; Thailand and Cambodia will jointly initiate soft collaborative activities e.g. training, consultative meetings, nature-based tourism development with Laos, and strengthen cooperation at provincial level as agreed by the cabinets of three countries.
- Build trust and sound understanding among the three countries through establishing the National Coordination Offices in Cambodia for correspondent collaborative activities
- Jointly submit the project proposal phase II to ITTO to imply the commitment of participating countries to conserve and manage biodiversity in the Emerald Triangle landscape.

Objective 2

- Use the ecological management zones derived in the project phase I as a broad framework for trans-boundary biodiversity conservation by the three countries

- Extend lessons learned from the Project Phase I for improvement and standardization of GIS database design and ecological survey methods in Cambodia
- Conduct training programs on protected area management or research programs on wide-range species for collaboration in on-the-ground activities

Objective 3

- Establish and strengthen local community network as a mechanism for participatory biodiversity conservation and sustainable economic development in the buffer zone in Thailand; in Cambodia this activity will be covered by CALM.
- Organize meetings, workshops and awareness raising campaign significant for ITTO trans-boundary component in Cambodia
- Increase livelihood of local people using domestication of wild flora and fauna and nature-based tourism activities through the project support

The most important results of Project Phase II will be inclusion of the Cambodia's Protected Forest for Conservation of Genetic Resources of Plants and Wildlife in the TBCA, and development of completed and standardized baseline ecological data, while Thailand will implement planned biodiversity conservation activities. Even though, Lao PDR will not be a formal participating country in Phase II but Thailand and Cambodia will encourage Laos to be involved in several collaborative activities, especially human resource development and research.

In Thailand, the Project Team and Superintendents will work closely with the Participatory Community Development Consultant to promote integrated community development pilot projects (ICDP) in selected communities. It is targeted that six ICDP activities will be implemented in enclaved communities in the Phatam National Park and surrounding PPF will implement ICDP pilot activities. The objectives of the ICDP include reducing the dependency on natural resources, conflict resolution, enhancing local cooperation in TBCA management and raising awareness. The dependency on natural resources and conflict resolution are focused on enhancing the knowledge of the local people so that they can find alternative income sources that are less dependent on natural resources, promoting tree planting, allowing seasonal collection of minor forest products for domestic consumption, promoting sustainable agriculture and agroforestry in the buffer zone of the PPFC. Management activities to enhance local cooperation in TBCA and to raise awareness include developing mechanisms such as advisory committee to allow people participating in the management of each protected area, hiring local people in day-to-day operational work of each protected area, and developing environmental education program about benefits and functions of protected area ecosystem and its benefits to the local communities. The long-term management plan already defined the process to implement the ICDP as follows:

- Organizing meeting and workshops among park officials, project team, local communities, and NGOs in TBCA and ICDP
- Establishing and strengthening capacity of local committee to facilitate ICDP
- Encouraging and promoting sustainable agriculture and agroforestry practices in the buffer zones of the PPFC
- Developing regulations and criteria on project selection and evaluation, as well as appropriate access to non-timber forest products.

It is noted that specific activities to be undertaken under the ICDP are not defined in the project proposal but the Project Team will encourage local committee to develop criteria and regulation on project selection. The Project Team has discussed with stakeholders in local communities and officials of Community Development Department it is found that the promising ICDP projects and related activities that should be promoted are as follows:

- Handicraft from bamboo (1 pilot project): Encouraging the villager to create bamboo furniture, the bamboo has been used as agricultural tools for a long time. This project will strengthen and increase the value of bamboo tools and invent varieties of souvenirs for visitors as One Tambon One Product (OTOP) Scheme.
- Home-stay project. (2 pilot projects): There are 4 villages of 40-50 households, that have potential to develop as home-stay for eco-tourism. This project will educate villagers to manage tourism activities, so that local people could gain more income and reduce dependency on natural resources from the PPFC.

- Food Bank: fruit tree plantation (1 pilot project): The fruit tree plantation will provide alternative income as well as food resources to local people. The Project Team will work closely with officials from Department of Agricultural Extension to educate local people to grow fruit tree in suitable area surrounding the PPFC. In addition, the Project will support seedling and know-how on fruit tree plantation to concerned parties.
- Wild Orchid Tissue Culture Project (2 pilot projects): The project will propagate wild orchid, not listed as endangered species, in the existing nursery at the HQ of PPFC Project and distributes seedling to participating members. In addition, the Project will train local people to propagate seedling and marketing aspects in the target areas.

In Cambodia, within the proposed project implementation site (Preah Vihear Protected Forest or PVPF and buffer), several activities are currently being completed by the Conservation Areas through Landscape Management (CALM) Project. CALM will be covering activities such as biological research, community projects (especially community forestry), and tourism development. Therefore ITTO funding is not necessary for those activities. A substantial GIS database already exists for the PVPF, including biological and socio-economic datasets. CALM has established a biological monitoring program and has carried out several socio-economic surveys with the NGO Action against Hunger.

In order to strengthen the trans-boundary biodiversity conservation area, Cambodia needs the support of ITTO to cover the thematic areas not included in the CALM project objectives. The ITTO project would represent a good opportunity for the Forestry Administration (FA) to get some resources to support the management of the PVPF. This type of assistance is not well-covered by CALM. The proposed project implementation site is an extremely remote location and lie along the Emerald Triangle situated between Cambodia, Thailand and Laos. The management of the forest is particularly challenging. Therefore, we need ITTO to support the following components: trans-boundary initiative activities (such as meetings, workshops and study tours), training of FA officials in protected forest management and GIS databank management, law enforcement activities, community livelihood development projects (CLDP), infrastructure development and acquisition of capital items.

Through the CLDP, local communities will reduce their dependence on the use of natural resources and land in the PVPF. The intervention of these pilot projects will not be implemented sequentially, but in an integrated manner over the next two years and beyond. Seven CLDP pilot sites are proposed and activities to be undertaken are as follows:

- Family chicken and duck rearing (2 pilot projects): These pilot projects will provide 25 chickens/ducks/each to selected local families settled in and around PVPF. Initially the project will be able to provide 4000-5000 chickens/or ducks for 160-200 families. The chickens and duck will provide a source of protein for local people, reducing dependence on bush meats.
- Rice Bank (2 pilot projects): Up to date socio-economic assessments indicate that 2/5 of family settled in and around PVPF are rice insufficient for 2-3 months of the year. So those families are forced to loan or buy rice from other individuals or villages nearby, thus creating a local market and encouraging the commercialization of rice production. In addition, those families are under pressure to generate income by increasing harvesting of Forest and Non-forest Products from the PVPF or to clear more forest land to offset their debt. Rice banks can help to tackle this cycle and make a positive contribution to poverty reduction.
- Fruit tree and vegetable plantations (2 pilot projects): Encouraging people to plant more fruit trees and vegetables on their village agricultural land and around their houses will assist in food security for the local families. The surplus edible fruit and vegetables that local people can raise in their families gardens can be sold in local markets or to tourists. This will provide supplemental income for local families.
- Fast growing trees and medicinal plant pilot project (one pilot project): Replanting fast growing trees and medicinal plants on cleared land or in designated community forestry land will be piloted with technical and financial support from the Project Phase II, as well as from the FA Tree Nursery in Preah Vihear Province. The labor for this activity can be sourced from PVPF staff, local communities, and beneficiaries of the above activities. The World Food Program initiative "Food for Work" may also be partner to this kind of work for restoring forest resources in these areas. After the two year planting of fast

growing trees, the local community would be able to harvest gradually the trees that will be used for fuel woods and some others for house construction. The medicinal plants can be used by the local people as traditional remedy as well as sale in local markets for obtaining additional family income.

It is noted that the proposed ITTO project and CALM project do not overlap on the activities to be implemented, but both projects would be working in partnership in order to optimize their effort and efficiency.

In the third stage, Thailand, Cambodia and Lao PDR will harmonize guidelines for management planning and implement a lot of joint ecological monitoring activities. It is targeted that full cooperation (Sandwith *et al.*, 2001; ITTO/RFD, 2000) will cover technical aspects (e.g. research, conservation, and management), protection, information sharing, human resource development, development of tourism package, joint efforts against poaching, illegal trade of endangered and rare species, etc.

2.4 Target beneficiaries

The main beneficiaries of the project phase II are as follows:

- In Thailand, the PPFC protects the head watersheds that supply water to the Sirinthorn and Pak Moon Hydropowers.
- The local communities involving in buffer zone management gain additional knowledge on alternative income generation and have opportunity to express their expectation and share responsibility in natural resources management.
- Thailand, Cambodia and Laos are recognized by international communities and show commitment in biodiversity conservation as rectified.
- Each country has more reliable data within its own country and neighboring countries to assist decision-making.
- Park rangers will gain knowledge and effective tools in conservation management planning and have opportunity to interact with park rangers working in adjoining protected areas

2.5 Technical and scientific aspects

This project is designed to contribute to the successful completion of the Project's Phase I, especially implementation of the working plan. The Proposed Project's Phase II is simply divided into two components: Thailand, and other participating countries.

The major focus in Thailand will be enhancing cooperation between Thailand, Cambodia and Laos for trans-boundary biodiversity conservation as initiated during the Project's Phase I. Research program on wide-range species distribution across the tri-national boundary and training will be conducted to increase capacity of protected area staff. On the ground, the project will focus on an effective system of collaboration with local communities in through ICDP activities in Thailand and CLDP in Cambodia. Technical and financial support will be allocated for pilot activities as a mechanism for participatory planning process. At the same time, the local people will gain further guidance and assistance in the development of ecotourism, wild fruit planting, orchid propagation, frog culture and other economic activities from knowledgeable people or concerned institute to generate additional income and reduce dependency on forest resources.

Cambodia also took less part in the PPFC Project's Phase I, but a complete biological and socio-economic analysis exists for Preah Vihear as a consequence of CALM work and studies by Action Against Hunger. However standardized and reliable database among three countries is of important for trans-boundary conservation. The major focus will be initiating or revising the existing management plan to match the long-term management plan of the PPFC. The acquired data will be installed in GIS which is capable of storing, retrieving, analyzing and displaying

biophysical and socio-economic data so that they can serve as a basis for taking reliable decisions on management option. The PPFC Project's Phase I already developed GIS database structure and database dictionary. Thus, GIS technician working in Laos can make use of this report for preparation of GIS database. In Cambodia the protected forest staff will be trained in GIS and databank management. At the end of Phase II, spatial and non-spatial data will be harmonized among three countries that will facilitate data sharing as expected. It is noticed that some activities such as research program and training can be jointly conducted at the same time. So that participants from all three countries will have opportunities to exchange experience and build better relationship.

Meanwhile, the Project will seek additional partners, especially in technical and scientific aspects. The Kasetsart University Faculty of Forestry (KUFF) will be a prime research partner on protected areas and biodiversity conservation. It is targeted that the professors and graduate students of KUFF will conduct a number of researches in the PPFC during project implementation. In addition, the Project Team already explored cooperation with Ubon Rachathani University in tissue culture and community-based development activities during Project Phase I. It is hoped that this research cooperation will continue and the research outputs will strengthen the Emerald Triangle TBCA Project.

2.6 Economic aspects

The protected areas can generate economic benefits for both local and national levels. In the last fiscal year, there were approximately 314,000 Thai and 5,500 foreigners visiting the PPFC. These tourists generated US\$ 210,000 (Tanakajana, 2003). With appropriate management of protected areas, improvement of recreation facilities and good collaboration between the three countries, it is believed that a number of local and foreigner tourists will increase and generate more income to local communities. The project proposal will include survey of potential recreation sites, particularly along the Me Kong River to promote ecotourism. In addition, training activities related to tourism management will be conducted for concerned parties.

2.7 Environmental aspects

This project proposal will have no negative impact on the biodiversity and the environment. The pilot activity fund for ICDP at targeted communities will be allocated to projects with environmental friendly. It will be consistent with the ecological management zones derived from the project phase I. Meanwhile, this proposed project will raise awareness in biodiversity conservation both inside protected areas and in the buffer zone. Domestication of wild flora and fauna for subsistent living is also targeted. Finally, this proposal will enhance biodiversity across the political boundaries of the three countries which have been promoted by international communities.

2.8 Social aspects

There are more than 80 villages situated within 3-km from the boundary of the Thailand's PPFC and the total population is estimated approximately 89,000 individuals whose livelihood may affect biodiversity conservation and have conflict with protected areas e.g. forest encroachment for unsustainable agriculture, raising cow and buffalo, poaching. The majority of households (70%) had agriculture as their major occupation and followed by fishery (10%). The average annual household income is US\$ 1,070 or one-third of the Ubon Rachathani city. Sixty-four percent of local population said their incomes were not sufficient (Tanakajana, 2003) to cover expenses such as food and basic services. Most of local people obtained education at primary school (40%) and secondary school (30%). Currently, there are four communities situated inside the Phatam National Park who have been settled in this area long time ago before the establishment of Phatam. According to the interview with Superintendent and local people, there are no reports of conflicts between local people and park rangers because they have promised to stop shifting cultivation. Considering political situation and the relation between local people and park rangers, there will be no resettlement project.

Social information inside protected areas and in the buffer zone in Laos is limited. In Cambodia Preah Vihear is a sparsely populated province, with a total population of around 130,000 people. Until April 1998, it could only be accessed by air as the roads were mined. The province has consequently failed to benefit from the development process experienced elsewhere in Cambodia. Preah Vihear has seven districts, four of which are cut off in the wet season by the Steung Saen River. Large areas of the same four districts were until 1998, too insecure for development projects. In the latter half of 1998, security improved and NGOs gained access to most parts of the province (Action Against Hunger, 2003). The majority of Cambodians today are rural and poor, with an average capita per income of less than \$1 per day (ICEM, 2003). Specific socio-economic information is available thanks to CALM and Action Against Hunger studies but has not been completely processed and analyzed yet, particularly for the Preah Vihear Protected Forest.

2.9 Risks

The success of the project really depends on the continued commitment and political will of the three countries, local people and stakeholders. However, this risk is relatively minimal at the moment and in the future because agreement and joint bilateral cabinet meetings between Thailand and neighboring countries have been conducted and friendship has been strengthened unless there are unforeseen political changes in the region.

Other risks that may be obstacles to the project implementation are as follows:

- Laos PDR is not interested to participate and expand commercial logging to be implemented in all forested areas along the border.
- The Government of Thailand and/or neighboring countries develops huge infrastructure and golf course along the border to attract luxury visitors.
- Local people do not participate in the ICDP and CLPD activities and cling on unsustainable agricultural practices.
- Activities are not implemented as scheduled in the work plan due to delayed funding or the complexities of administrative procedures and regulations.
- Unsecured accessibility due to landmines.
- Military tension along the tri-national border or contagious disease such as SAR or bird flu is uprising so that both foreign and local tourists are afraid to visit protected areas as targeted.
- Failure of the responsible agencies (RFD, FA and DoF) to provide sufficient incentives for officers to willing work would certainly reduce the quality and quantity of project staff assigned to the Project Management Office(s).

2.10 Project sustainability

As noted in Section 2.3, Project Strategy, the ITTO Emerald Triangle Project is continuing to the PPFC Phase I and complementary to the ongoing Conservation Areas through Landscape Management (CALM) UNDP/GEF project, which has been funded for the next seven years. In addition, it is in line with the Royal Thai Government Policy on biodiversity conservation and sustainable use.

In Thailand, the Emerald Triangle Project will build on the achievement of project Phase I. It requires only minimum investment and maintenance cost because most equipment are already in place. In addition, the Project will employ only domestic TA and PM under supervision of the National Coordination Committee to manage the project. In addition, protected areas staff both at the regional and site levels will gain knowledge and experience from consultants/experts to maintain activities, update database and initiate more collaborative activities. In addition, the ICDP approach and participatory processes with communities and stakeholders will build local capacity for buffer management and income generation to alleviate local poverty. In addition, the knowledge gained from the ICDP project and a number of training conducted by the Project can be used and integrated in the ongoing Government Policy on One Tambon One Product (OTOP) Project which is implemented in every village nationwide.

Importantly, the National Policies, Measures and Plans on Biodiversity Conservation and Sustainable Uses during 2003-2007 clearly defines the establishment of transboundary reserves with neighboring countries and promotion of regional collaboration on protected area management and biodiversity conservation. It is ensure that the Royal Thai Government will sustain the ITTO Emerald Triangle Project after 2005 and integrate it into national program as well as use this initiative as a model for the three remaining complexes that have potential for next TBCA in Thailand, including Western Forest Complex and Kaeng Krachan Complex in the west and Halabala Complex in the south. Thus, there are a lot of possibilities to seek additional budget to maintain and operate this project after 2005.

In Cambodia, the CALM project will thus insure that many components of the joint project are assured of funding for five years beyond the end of Phase II of the ITTO project. Significant effort has been made to ensure the sustainability of the CALM project beyond seven years. The major factors presented to demonstrate sustainability of the approved and funded CALM proposal are directly applicable to demonstrating a high potential for sustainability of the ITTO proposal. These factors are articulated in some detail below.

As most of the important interventions are institutional or consist of capacity building, training and awareness, the project has a high degree of sustainability. Most of the activities requiring a significant start-up investment will have been completed by the end of the project, and will assure continuation of relevant elements and activities beyond the life of the project. Activities that need to continue are all low cost.

ITTO will build the capacity of the government staff at the national and local levels to maintain project ownership. Further, ITTO will build cross-institutional coordination amongst relevant government agencies. The appropriate government authorities will endorse key project outcomes. Consultation and participatory processes will generate a better understanding of conservation priorities and better cooperation with relevant government agencies. The participatory and consultation processes will also be promoted to generate trust and respect the voices of various national stakeholders.

The project will develop leadership of key national staff in planning, decision-making and coordination. Cambodian nationals with the minimum of technical assistance will lead the implementation process from external consultants. This will ensure that there is very little dependency on external resources after completion of the project. The use of participatory land-use planning processes with communities and stakeholders will build local capacity for land management and development planning. ITTO project will assist in develop a landscape conservation plan, which will be mainstreamed into the local, provincial and national planning process. The project will integrate the principles of good governance such as improving accountability and transparency of decision-making process.

The project will be designed to cover all setup costs, and ensure that any necessary long-term maintenance costs of project initiatives are minimal. For components or activities initial costs will be high, however necessary running and maintenance costs after this project phase will be considerably low.

However it is recognised that sufficient financial sustainability must be established to cover these maintenance costs, especially the incentives scheme and monitoring program. An incremental cost matrix will be produced to identify the costs and activities. Opportunities for key-species eco-tourism have been researched during the 2000-2004, and there is potential for tourism to fund necessary project activities, especially the village incentive scheme. During the full project, activities will create a framework for key species eco-tourism that benefits both biodiversity and local communities. Further activities will investigate the potential for establishing a trust fund, or securing long-term additional government and NGO financial commitment, to fund other necessary project activities (e.g. the monitoring program).

The project will ensure that there is a structure for sound management of long-term activities. Site management staff will be members of the appropriate authority with jurisdiction over the area

including key sites. The project will not therefore create new (non-government) management structures. The only exception is the Site Project Manager; this position will follow a model created by FA/CAT and FA/WCS for another region in Cambodia. In this region, the FA employs a site manager to co-ordinate activities between FA jurisdictional units within a landscape of importance for biodiversity conservation. The ITTO project will ensure that the importance of particular sites within the landscape is recognised and provide support for the continued existence of site managers in the long term. Activities under this component will also establish the infrastructure and necessary equipment for long-term management of key sites.

3. Outputs

According to three specific objectives as outlined in item 1.2, the implementing agencies have developed outputs to support those objectives as follows:

3.1 Specific objective 1: Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation area

Output 1.1: A management structure for cooperation at local and national levels for TBCA adopted and operated by the three countries

Output 1.2: TBCA activities among the three countries implemented

3.2 Specific objective 2: Enhance protection measures and monitoring the biological resources along tri-national borders

Output 2.1: Human resource capacity in biodiversity conservation and management strengthened

Output 2.3: Law enforcement and protection measures strengthened

Output 2.3: Research programs on wide-ranging species and ecological processes at the proposed corridor carried out and published

3.3 Specific objective 3: Strengthen the involvement of local communities and stakeholders to ensure sustainable uses and management of natural resources both inside protected areas and in the buffer zones

Output 3.1: Local community fora and network established and strengthened in selected Communities in enclaved communities and/or in the buffer zone

Output 3.2: ICPD or CLDP activities carried out in the Emerald Triangle's buffer zone through pilot activity fund

Output 3.3: Nature-based tourism activities established and expanded

4. Activities and Inputs

4.1 Thailand

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
<i>Specific Objective I: Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation area</i>			
Output 1.1: A management structure for cooperation at local and national levels for TBCA adopted and operated by the three countries			
A1.1.1	Establishment of tri-national cooperation structures for the TBCA in each country	-Project Manager, 24 mm -Local TA, 24 mm -Secretary, 24 mm -Auditor, 3 audits -8 Air- tickets for PM, TA to Cambodia and Laos -DSA for PM and TA to Cambodia and Laos -Air- tickets, vehicle for workshop and training organizers, resource persons, staff and participants - Consultative Committee Meeting, 2 meetings	@ 2,500 / m @ 2,000 / m @ 1,000 / m @ 1,250 / audit @ 500 / ticket @ 100 / day @ 200 / person @ 500 / meeting
A1.1.2	Establishment of the Project Steering Committee (PSC) inclusion of the Director-Generals, country coordinators of the three countries, etc. in accordance with ITTO rules	-PSC meetings, 3 meetings	@ 500 / meeting
Output1.2: TBCA activities among the three countries implemented			
A1.2.1	Organize Joint Task Force meetings for cooperation	-2 x 1 days meeting-Joint Task Force, 12 participants	@ 30 /participant
A1.2.2	Organize stakeholders meetings and TBCA workshop to discuss on cooperation	-2 x 1 day meeting-Stakeholders, 12 participants	@ 30 /participant
A1.2.3	Organize tri-national meetings for cooperation between Thailand, Cambodia and Laos	-Tri - national meetings, 2 meetings	@ 1,000 / meeting
<i>Specific Objective II: Enhance protection measures and monitoring of the biological resources along tri-national borders</i>			
Output2.1: Human resources capacity in biodiversity conservation and management strengthened.			
A2.1.1	Elaborate and organize training programs for all levels of PA staff possibly inclusion of Cambodia and Laotian participants	-Consultant for Participatory Community – Development and Tourism 12 mm -1 x 2 days meeting-Staff, 10 participants	@ 1,500 / m @ 30 / participant
A2.1.2	Organize training on domestication of wild flora and fauna for local people	-3 Sub-contract-Local Support Staff, 24 mm -1 x 2 days training, Local People 12 participants	@ 200 / m @ 30 / participant

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
Output 2.2: Law enforcement and protection measures strengthened			
A2.2.1	Collaborate with border patrol police and military to prevent wildlife poaching, illegal logging, trading and collection of wild plant	-2 x 1 day GIS training-Border Patrol, 12 participants -2 x 1 day Wildlife training-Border Patrol, 12 participants	@ 30 / participant @ 30 / participant
A2.2.2	Update and maintain information system to support PA staff and decision makers	-GIS Consultant, 12 mm -2 Sub-contract-Local Support Staff, 24 mm -Purchase of mapping data -Upgrade GIS computer -1 Notebooks -Publications of information material	@ 1,250 / m @ 200 / m @ 4,000 @ 3,000 @ 2,700 @ 8,000
A2.2.3	Provide necessary equipment and facilities for effective patrolling and protection	-Purchase of materials, etc. -5 GPS -Vehicle maintenance, fuel, 2 units	@ 1,500 @ 400 @ 2,000 unit / yr
A2.2.4	Undertake participatory on site demarcation of enclaved communities in Phatam NP for local use and rehabilitation areas	- 1 x 2 days workshop-Local People, 20 participants -1 x 1 days training-Staff, 20 participants	@ 30 / participant @ 30 / participant
Output 2.3: Research programs on wide-ranging species and ecological processes at the proposed corridor carried out and published			
A2.3.1	Conduct research programs on wide-range distribution and habitat utilization between Thailand, Cambodia and Laos with the involvement of academic research	-Consultancies for Wildlife 6 mm	@ 1,000 / m
A2.3.2	Conduct research programs on medicinal and edible plants that have potential for domestication with the involvement of academic research	-Consultancies for Botany, 6 mm	@ 1,000 / m
A2.3.3	Carried out physical studies and ecological surveys in the proposed corridor	-Consultancies for Ecology, 6mm	@ 1,000 / m
A2.3.4	Publish the results of physical, ecological survey and research findings	-Publications of surveys and studies results	@ 8,000
<i>Specific Objective III: Strengthen the involvement of local communities and stakeholders to ensure sustainable uses and management of natural resources both inside PAs and in the buffer zones</i>			
Output 3.1: Local community fora and network established and strengthened in selected communities inside PAs and in the buffer zone			
A3.1.1	Build up database on various local community groups	-Publications of information and materials	@ 4,000
A3.1.2	Establish and strengthen local community fora and network through voluntary basis to facilitate biodiversity conservation	-DSA for 2 Key Staffs	@ 30 / day
A3.1.3	Conduct meetings and workshops to raise awareness on conservation and benefits on: TBCA	-2 x 1 days meeting & workshops-Local People, 12 participants	@ 30 /participant
A3.1.4	Organize a study tour for community network to gain experience from other projects in Thailand	-1 x 2 days study tour-Local People, 12 participants	@ 30 /participant

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
Output 3.2: ICDP or CLDP activities carried out in the Emerald Triangle's buffer zone through pilot activity fund			
A3.2.1	Conduct workshop in formulating ICDP project proposal, criteria, regulation and monitoring system	-2 x 1 days workshops-Local People, 15 participants	@ 30 /participant
A3.2.2	Provide pilot activity fund to local community network in accordance with criteria jointly approved by the Project and the local community network	-ICDP Pilot Activity, 6 activities	@ 1,400 / activity
A3.2.3	Regularly monitor and evaluate the implementation of pilot activity fund in terms of sustainability and consistent with TBCA as well as propose adjustments if needed	-DSA for 1 Key Staffs -2 x 1 days ICDP training-Staff, 15 participants -2 x 2 days GIS trainings-Staff, 15 participants -2 x 2 days Monitoring training-Staff, 15 participants	@ 30 / day @ 30 / day @ 30 / day @ 30 / day
A3.2.4	Purchase additional equipment for the existing tissue culture lab and establish a new nursery at the HQ Project for potential domesticated plant species	-Tissue Culture Lab and Nursery accessories	@ 5,000
Output 3.3 : Nature-based tourism activities established and expanded			
A3.3.1	Jointly conduct survey along the Mekong River/Thai-Cambodian borders to identify potential areas for culture, adventure and nature based tourism	-DSA for 1 Key Staffs	@ 30 / day
A3.3.2	Eco-tourism packages developed and approved by concerned parties	-DSA for 1 Key Staffs -2 x 1 days Eco-tour training & workshop-Local People, 15 participants	@ 30 / day @ 30 / day
A3.3.3	Conduct training in nature-based tourism management to PA staff and concerned parties	- 1 x 1 days Eco-tour training-Staff, 15 participants	@ 30 / day

4.2 Cambodia

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
Specific Objective I: Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation area			
Output 1.1: A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries			
A1.1.1	Establishment of the National Project Steering Committee (NPSC), National Project Technical Committee (NPTC) and Field Management Unit (FMU).	<ul style="list-style-type: none"> - Project Manager, 24 mm - TA, 24 mm - Administrative officer, office secretary and clerical assistants, 24 mm - Office Supplies, 24 mm - 6 Air-tickets for PM, PC & TA to Thailand - DSA for PM, PC & TA to Thailand 4days/year/person - Air-tickets, vehicle for workshop and training organizers, resource persons, staff and participants - Consultative Committee Meeting, 4 meetings 	<ul style="list-style-type: none"> @ 1,350/m @ 1,200/m @ 1,150/m @ 200/m @ 400/ticket @ 75/day/person @ 1000/year @ 1000/meeting
A1.1.2	Draft an agenda and organize joint task force workshops for the Protected Forest staffs to initiate a dialogue on trans-boundary conservation at the local level	- 1 day workshop national joint task force meeting, 20 participants	@ 30/participant
Output1.2: TBCA activities among the 3 countries strengthened			
A1.2.1	Organize joint task force meetings for trans-boundary cooperation	- 1 day workshop national joint task force meeting, 20 participants	@ 30/participant
A1.2.2	Organize stakeholders meetings to discuss on trans-boundary cooperation	- 2 x 2 day national stakeholder meeting, 25 participants	@ 30/participant
A 1.2.3	Organize a high level tri-national meeting for transboundary conservation cooperation	<ul style="list-style-type: none"> - 1 x 3 days high level meeting; DSA for 10 visiting participants - Transport @500/vsiting participant - Miscellaneous organization cost: 	<ul style="list-style-type: none"> @ 100/participant @ 500/participant @ 1,500
Specific Objective II: Enhance protection and monitoring of the biological resources along tri-national borders.			
Output2.1: Human resources capacity for conservation and management strengthened.			
A2.1.1	Strengthening Protected Forest management by allocating more equipment, staff and construct main field control post	<ul style="list-style-type: none"> - Purchase of material - 5 GPS - 2 Computers - 1 4x4 Vehicle - Main field control post (Field Office) - 5 Motorbikes - Vehicle maintenance, fuel, 2 years - Motorbike maintenance, fuel, 2 years - 2 Digital Camera 	<ul style="list-style-type: none"> @ 1,500 @ 350 @ 2,000 @ 25,000 @ 17,000 @ 1,300 @ 2,500/unit/year @ 120/unit/year @ 400/unit

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
A2.1.2	Training Protected Forest staff at operational level in biodiversity management, GIS Mapping, GIS databank management, landscape planning and habitat suitability analysis	- 2 x 2 day training session for PF staff, 12 persons - GIS Specialist, 170 days - GIS software + mapping data 1,500 & miscellaneous equipment 1,500 - 2 Sub-contract Local Support Staff, 170 days	@ 30/day/person @120/day @ 3,000 @ 30/day/person
A2.1.3	Prepare and publish management plan of Preah Vihear Protected forest	- 2 x 1 day meetings with CALM project management team, 15 persons - 2 x 1 day meeting with concerned parties, 25 persons - Production & distribution of management plan, 160 copies	@ 30/day/person @ 30/day/person @ 18/copy
A2.1.4	Conducting workshops on law enforcement and international conventions related to biodiversity conservation (e.g. CITES, CBD, RAMSAR)	- 1 x 2 days workshop on law enforcement and international conservation convention, 40 participants/workshop	@ 30/day/person
Output 2.3: Law enforcement and protection measures strengthened			
A2.3.1	Boundary demarcation and mapping of the Preah Vihear Protected Forest	- Sign board - 2 Ranger outposts	@ 4,000 @ 6,500/post
A2.3.2	Trans-boundary co-patrolling in critical habitats and strict control over wildlife trade, carrying of firearms, encroachment, area expansion and livestock into the Protected Forest	- 2 x 1 day wildlife training-border patrol, 20 participants - 20 law enforcement patrols, 20 participants - Field equipment and medical kits	@ 40/day/person @ 1,150/patrol @ 3,000/year
Specific Objective III: Strengthening involvement of local communities and stakeholders to ensure sustainable conservation and management of natural resources both inside the Protected Forest and in the buffer zones.			
Output 3.1: Local community fora and Network established in selected communities in enclave communities and/or in the buffer zone.			
A3.1.1	Raising awareness of local people on the existence of the protected forest and the new forestry law.	- Publication of conservation education material	@ 1,800
A3.1.2	Meeting between FA and local committees to facilitate biodiversity conservation	- 2 x 1 day meeting, 15 participants	@ 30/day/person
A3.1.3	Organizing mutual visits of Protected Forest staff and local people to exchange skill, experience and information	- 1 x 5 days in-country study tour for staff & local people, 12 persons	@ 30/day/person
Output 3.2: Community Livelihood Development Program (CLDP) carried out in the Preah Vihear Protected Forest buffer zone through pilot activity fund			
A3.2.1	Encouraging and promoting sustainable agriculture and agro-forestry practices in buffer zones of the Protected Forest, and establishing reward system for outstanding conservation efforts	- CLDP Pilot Activity, 7 activities - DSA for 1 Key staff, 40 days - 2 x 1 day introduction meeting on the CLDP pilot project, 20 participants - 1 day meeting to present the results and lessons learnt, 25 persons	@ 2,000/activity @ 30/day @ 30/day/person @ 30/day/person

ACTIVITY	DESCRIPTION	ITTO CONTRIBUTION	US\$
A3.2.2	Developing regulations and criteria on appropriate access to non-timber forest products	- 1 day workshop for local communities, 25 participants - 1 day meeting for FA officials & local authorities, 30 participants	@ 30/day/person @ 30/day/person
Output 3.3: Nature-based tourism activities established and expanded			
A3.3.1	Publicizing the value of biodiversity via mass media and conducting study tours on biodiversity conservation	- Publication of information material	@ 4,920
A3.3.2	Providing training in eco-tourism management to Protected Forest staff and concerned parties	- 1 day eco-tourism training session for 20 PF Staff	@ 30/participant

5. Logistic Framework Worksheets

LOGICAL FRAMEWORK MATRIX

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Development Objective To conserve trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex between Thailand, Cambodia and Lao PDR in a framework of trans-boundary biodiversity conservation area	<ul style="list-style-type: none"> Inclusion of more protected areas in the TBCA Number of species and frequency of occurrence Benefits derived from ICPD/CLDP activities in selected communities 	<ul style="list-style-type: none"> Project report Ecological monitoring system 	<ul style="list-style-type: none"> Political will and commitment of participating countries on trans-boundary cooperation International supports and engagement
Specific Objectives 1. Strengthen cooperation between Thailand, Cambodia and Laos for biodiversity conservation in respective trans-boundary conservation area	<ul style="list-style-type: none"> National Coordinating Committee on TBCA established in Thailand and Cambodia Number of meetings among participating countries 	<ul style="list-style-type: none"> Report and minutes of meetings 	<ul style="list-style-type: none"> Continued political support of Thailand and Cambodia; Laos is interested in TBCA
2. Enhance protection measures and monitoring of the biological resources along tri-national borders	<ul style="list-style-type: none"> Illegal cases are decreased Number of joint collaborative activities research programs on landscape wildlife species adopted 	<ul style="list-style-type: none"> Progress report Map and technical reports 	<ul style="list-style-type: none"> Sufficient technical and equipment support to rangers, border patrol police and military Commitment of Joint task force and scientists
3. Strengthen the involvement of local communities and stakeholders to ensure sustainable uses and management of natural resources both inside PAs in the buffer zone	<ul style="list-style-type: none"> Number of local groups participated in ICDP/CLDP Number of activities planned and implemented 	<ul style="list-style-type: none"> Project applications and reports Minutes of meetings and/or agreement between park officials and local people 	<ul style="list-style-type: none"> Commitment of local communities in active participation Strong leadership and proactive by project team and protected area officials
Outputs 1.1 A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries	<ul style="list-style-type: none"> PSC and National Coordination Committee established Appropriate staff for project deployed 	<ul style="list-style-type: none"> Minutes of the meetings List of personnel and infrastructure & equipment 	Qualified and appropriate staff are provided by Thai and Cambodian governments

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
1.2 TBCA activities among the three countries implemented	Meeting of participating stakeholders	Minutes of the meetings	Thailand and Cambodia committed to cooperate on TBCA and Laos interested
2.1 Human resource capacity in biodiversity conservation and management strengthened	Number of training courses and participants	<ul style="list-style-type: none"> • Training reports and evaluations 	<ul style="list-style-type: none"> • Staff available for training • Training is effectively provided by knowledgeable instructors
2.2 Law enforcement and protection measures strengthened	<ul style="list-style-type: none"> • Illegal cases decreased; • Number of species and frequency of occurrence of key wildlife species 	<ul style="list-style-type: none"> • Task force report • Survey report 	<ul style="list-style-type: none"> • Border patrol police and military involved in the project; • Provision of sufficient equipment and incentive
2.3 Research program on wide-ranging species and ecological baseline data at the proposed corridor carried out and published	<ul style="list-style-type: none"> • Joint research program planned and implemented • A completed baseline data at the proposed corridor 	<ul style="list-style-type: none"> • Progress reports • Survey and technical reports 	<ul style="list-style-type: none"> • Scientists of participating countries agree to identify focal monitoring species. • Accessibility is secured. • Protected area staff committed.
3.1 Local community fora established and strengthened in selected communities inside Pas and in the buffer zone	Number of community network and member established in target sites	Reports	<ul style="list-style-type: none"> • Local people are interested and willing to participate in ICDP/CLDP activities. • Superintendents of PAS project support these activities.
3.2 Integrated conservation and development programs carried out in the Emerald Triangle's buffer zone through pilot activity fund	Number of community-based conservation activities implemented in target sites	<ul style="list-style-type: none"> • Progress reports • Project evaluations 	<ul style="list-style-type: none"> • Pilot activity fund provided • Local communities implement the project as planned
3.3 Nature-based tourism activities established and expanded	<ul style="list-style-type: none"> • Potential ecotourism sites identified • Package tour developed 	<ul style="list-style-type: none"> • Local organizing tours, number of tourists • Project report 	<ul style="list-style-type: none"> • Collaborative between park official and local people • Government continue support ecotourism in protected areas (national park and wildlife sanctuary)

6. Work Plan

6.1 Thailand

6.1 Thailand		Responsible Party	Month from Starting Date																								
Outputs/ Activities			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Output 1.1: A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries																											
Activity A1.1.1	RFD PM TA																										
Activity A1.1.2	RFD PM TA																										
Output 1.2: TBCA activities among the three countries implemented																											
Activity A1.2.1	RFD PM TA Staff																										
Activity A1.2.2	PM TA Staff																										
Activity A1.2.3	RFD PM TA Staff																										
Output 2.1: Human resources capacity in biodiversity conservation and management strengthened																											
Activity A2.1.1	PM TA Consultant Staff																										
Activity A2.1.2	PM TA Staff																										
Output 2.2: Law enforcement and protection measures strengthened																											
Activity A2.2.1	PM TA Consultant																										
Activity A2.2.2	PM Consultant																										
Activity A2.2.3	PM Consultant																										
Activity A2.2.4	PM TA Consultant Staff																										
Output 2.3: Research programs on wide-ranging species and ecological processes at the proposed corridor carried out and published																											
Activity A2.3.1	PM TA Consultant																										
Activity A2.3.2	PM TA Consultant																										
Activity A2.3.3	PM TA Consultant																										
Activity A2.3.4	PM TA																										
Output 3.1: Local community for a and network established and strengthened in selected communities inside PAs and in the buffer zone																											
Activity A3.1.1	PM TA																										
Activity A3.1.2	PM Staff																										
Activity A3.1.3	PM TA Staff																										
Activity A3.1.4	PM Staff																										
Output 3.2: ICDP or CLDP carried out in the Emerald Triangle's buffer zone through pilot activity fund																											
Activity A3.2.1	PM TA Consultant Staff																										
Activity A3.2.2	PM TA Consultant Staff																										
Activity A3.2.3	PM TA Consultant Staff																										
Activity A3.2.4	PM Staff																										
Output 3.3 : Nature-based tourism activities established and expanded																											
Activity A3.3.1	PM Staff																										
Activity A3.3.2	PM TA Consultant Staff																										
Activity A3.3.3	PM TA Consultant																										

6.2 Cambodia

Outputs/ Activities	Responsible Party	Month from Starting Date																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output 1.1: A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries																									
Activity A1.1.1	FA																								
Activity A1.1.2	PM, TA, Staffs																								
Output1.2: TBCA among the three countries strengthened																									
Activity A1.2.1	FA, PM, TA, Staffs																								
Activity A1.2.2	FA, PM, TA, Staffs																								
Activity A1.2.3	FA, PM, TA, Staffs																								
Output2.1: Human resources capacity for conservation and management strengthened.																									
Activity A2.1.1	FA, PM, TA, Consultant, staffs																								
Activity A2.1.2	PM, TA, Specialist, staffs																								
Activity A2.1.3	PM, TA, FA, staffs																								
Activity A2.1.4	PM, TA, FA, staffs																								
Output 2.3: Law enforcement and protection measures strengthened																									
Activity A2.3.1	PM, TA, GIS, Staff																								
Activity A2.3.2	PM, TA, Wildlife Specialist, Staff																								
Output 3.1: Local community forum established and strengthened in selected communities in enclave communities and/or in the buffer zone																									
Activity A3.1.1	PM, TA, Specialist, Staff																								
Activity A3.1.2	PM, TA, Specialist, Staff																								
Activity A3.1.3	PM, TA, FA, Staff																								
Output 3.2: Integrated conservation and development programs (ICDP) carried out in the PPFC's buffer zone through pilot activity fund																									
Activity A3.2.1	PM, TA, FA, Staff																								
Activity A3.2.2	PM, TA, Specialist, Staff																								
Output 3.3 : Nature-based tourism activities established and expanded																									
Activity A3.3.1	TA, Specialist, Staff																								
Activity A3.3.2	TA, Specialist, Staff																								

7. Budget

7.1 Thailand

7.1.1 ITTO Budget by Activity (US\$)

Output/ Activities	Budget Components, US \$							Total US \$
	Project Personnel	Sub- contracts	Duty Travel	Capital items	Consuma ble items	Miscell aneous	Year	
Output 1.1 A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries								
A1.1.1	132,000	3,750	14,800	-	-	1,000	Y1Y2	151,550
A1.1.2	-	-	-	-	-	1,500	Y1Y2	1,500
Sub Total	132,000	3,750	14,800	-	-	2,500		153,050
Output 1.2 TBCA activities among the three countries strengthened.								
A1.2.1	-	-	720	-	-	-	Y1Y2	720
A1.2.2	-	-	720	-	-	-	Y1Y2	720
A1.2.3	-	-	-	-	-	2,000	Y1Y2	2,000
Sub Total	-	-	1,440	-	-	2,000		3,440
Output 2.1 Human resources capacity in biodiversity conservation and management strengthened.								
A2.1.1	-	18,000	600	-	-	-	Y1Y2	18,600
A2.1.2	-	14,400	720	-	-	-	Y1Y2	15,120
Sub Total	-	32,400	1,320	-	-	-		33,720
Output 2.2 Research programs on wide-ranging species and ecological processes at the proposed corridor carried out and published.								
A2.2.1	-	-	1,440	-	-	-	Y1Y2	1,440
A2.2.2	-	24,600	-	2,700	7,000	8,000	Y1Y2	42,300
A2.2.3	-	-	-	2,000	1,500	8,000	Y1Y2	11,500
A2.2.4	-	-	1,800	-	-	-	Y2	1,800
Sub Total	-	24,600	3,240	4,700	8,500	16,000		57,040
Output 2.3 Law enforcement and protection measures strengthened.								
A2.3.1	-	6,000	-	-	-	-	Y1Y2	6,000
A2.3.2	-	6,000	-	-	-	-	Y1Y2	6,000
A2.3.3	-	6,000	-	-	-	-	Y1Y2	6,000
A2.3.4	-	-	-	-	-	8,000	Y1Y2	8,000
Sub Total	-	18,000	-	-	-	8,000		26,000
Output 3.1 Local community for a and network established and strengthened in selected communities inside PA and in the buffer zone.								
A3.1.1	-	-	-	-	-	4,000	Y2	4,000
A3.1.2	-	-	5,760	-	-	-	Y1Y2	5,760
A3.1.3	-	-	720	-	-	-	Y1	720
A3.1.4	-	-	720	-	-	-	Y1	720
Sub Total	-	-	7,200	-	-	4,000		11,200
Output 3.2 Integrated conservation and development programs (ICDP) carried out in the Emerald Triangle's buffer zone through pilot activity fund								
A3.2.1	-	-	900	-	-	-	Y1Y2	900
A3.2.2	-	-	-	-	-	8,400	Y1Y2	8,400
A3.2.3	-	-	7,380	-	-	-	Y1Y2	7,380
A3.2.4	-	-	-	5,000	-	-	Y1	5,000
Sub Total	-	-	8,280	5,000	-	8,400		21,680
Output 3.3 Nature-based tourism activities established.								
A3.3.1	-	-	2,880	-	-	-	Y1Y2	2,880
A3.3.2	-	-	3,780	-	-	-	Y1Y2	3,780
A3.3.3	-	-	450	-	-	-	Y1	450
Sub Total	-	-	7,110	-	-	-		7,110
TOTAL	132,000	78,750	43,390	9,700	8,500	40,900		313,240

7.1.2 Yearly ITTO Budget (US\$)

ITEM		Allocation for Thailand		
		Year 1	Year 2	TOTAL
10	Project Personnel			
13	Project Manager, at US\$2,500 per m	30,000	30,000	60,000
14	Secretary, at US\$1,000 per m	12,000	12,000	24,000
15	Local TA, at US\$2,000 per m	24,000	24,000	48,000
19	Component Total	66,000	66,000	132,000
20	Sub - contracts			
21	GIS Consultant, at US\$ 1,250 per m (12 m)	7,500	7,500	15,000
22	Consultant for Participatory Community Development and Tourism, at US\$ 1,500 per m (12 m)	9,000	9,000	18,000
23	Sub-contract for Wildlife specialist, at US\$ 1,000 per m (6 m)	3,000	3,000	6,000
24	Sub-contract for Botanist, at US\$ 1,000 per m (6 m)	3,000	3,000	6,000
25	Sub-contract for Ecologist, at US\$ 1,000 per m (6 m)	3,000	3,000	6,000
26	Auditor (3 x 1,250)	2,500	1,250	3,750
27	Sub-contract-Local Support Staff, at US\$ 200 per m (5 x 24 m)	12,000	12,000	24,000
29	Component Total	40,000	38,750	78,750
30	Duty Travel			
31	Daily Subsistence Allowance (DSA)			
31.1	PM and TA, 12 days/yr, US\$100/day (to Cam. and Laos)	2,400	2,400	4,800
31.2	5 Key Staff, 4 days per m, US\$ 30/day	7,200	7,200	14,400
31.3	Meetings, training, workshops and study tour for 473 participants US\$30 /participant /day	7,000	7,190	14,190
32	Transport Costs			
32.1	8 Air- tickets for PM, TA to Cambodia and Laos 2 trips/yr	2,000	2,000	4,000
32.2	Air- tickets, vehicle for workshop and training organizers, and resource persons	3,000	3,000	6,000
39	Component Total	21,600	21,790	43,390
40	Capital Items			
44	Capital equipment			
44.1	1 Notebooks, at US\$ 2,700	2,700	-	2,700
44.2	5 GPS, US\$400 / unit (1 Unit / PA ,WS)	2,000	-	2,000
44.3	Tissue Culture Lab and Nursery accessories	5,000	-	5,000
49	Component Total	9,700	-	9,700
50	Consumable Items			
54	Office supplies			
54.1	Purchase of materials	750	750	1,500
54.2	Purchase of mapping data	2,000	2,000	4,000
54.3	Upgrade GIS computer	3,000	-	3,000
59	Component Total	5,750	2,750	8,500
60	Miscellaneous			
61	Vehicle maintenance, fuel, US\$2,500 unit/year	4,000	4,000	8,000
62	Sundry			
62.1	PSC meetings, 3 meetings x US\$500	1,000	500	1,500
62.2	Consultative Committee Meeting, 2 meetings x \$500	500	500	1,000
62.3	6 ICDP Pilot Activity	4,200	4,200	8,400
62.4	2 Tri - national meetings, US\$1,000 per event	1,000	1,000	2,000
62.5	Publications of information material	5,000	7,000	12,000
62.6	Publications of surveys and studies results	-	8,000	8,000
69	Component Total	15,700	25,200	40,900
	TOTAL	158,750	154,490	313,240
80	ITTO Monitoring, Evaluation and Administration			
81	Monitoring cost	3,000	3,000	6,000
82	Evaluation cost	-	7,500	7,500
	Sub-Total 1	161,750	164,990	326,740
83	Administrative cost (8% of sub - total 1)	-	-	26,139
89	Component Total	161,750	164,990	352,879
99	GRAND TOTAL	161,750	164,990	352,879

7.1.3 Yearly contribution of the Government of Thailand to the project budget (US \$)

Item		Allocation		Total
		Year 1	Year 2	
10	Project Personnel			
11	Salary of national staff			
	Project Coordinator	10,800	10,800	21,600
	Head of Technical Section	9,600	9,600	19,200
	Head of biodiversity conservation section	9,600	9,600	19,200
	Head of information section	9,600	9,600	19,200
	Head of administration section	9,600	9,600	19,200
	GIS technician	8,400	8,400	16,800
13	Other labor	2,400	2,400	4,800
19	Component total	60,000	60,000	120,000
30	Duty Travel			
31	Daily subsistence allowance			
	311 4 assistances	2,100	2,100	4,200
	312 Other Labor	2,100	2,100	4,200
32	Transport costs	12,000	12,000	24,000
39	Component total	16,200	16,200	32,400
40	Capital Items			
41	Project offices	-	70,000	70,000
42	2 4x4 vehicles	-	30,000	30,000
43	Capital equipment	20,000	15,000	35,000
49	Component total	20,000	115,000	135,000
50	Consumable Items			
51	Gas and lubricants	3,000	3,000	6,000
52	Spares	3,000	3,000	6,000
53	Utilities	6,000	6,000	12,000
54	Office supplies	3,600	3,600	7,000
59	Component total	15,600	15,600	31,200
60	Miscellaneous			
61	Phone, fax	2,400	2,400	4,800
69	Component total	2,400	2,400	4,800
Grand Total		114,200	209,200	323,400

7.2 Cambodia

7.2.1 ITTO Budget by Activity (US\$)

Output/ Activities	Budget Components, US \$							Total US \$
	Project Personnel	Sub- contracts	Duty Travel	Capital items	Consuma ble items	Miscell aneous	Year	
Output 1.1 A management structure for cooperation at local and national levels for TBCA adopted and operated by three countries								
A1.1.1	88,800	-	6,200	-	4,800	2,000	Y1	101,800
A1.1.2	-	-	600	-	-	-	Y1	600
Sub Total	88,800	-	6,800	-	4,800	2,000		102,400
Output 1.2 TBCA activities among the three countries strengthened.								
A1.2.1	-	-	600	-	-	-	Y1	600
A1.2.2	-	-	3,000	-	-	-	Y1Y2	3,000
A1.2.3	-	-	-	-	-	9,500	Y2	9,500
Sub Total	-	-	3,600	-	-	9,500		13,100
Output 2.1 Human resources capacity in biodiversity conservation and management strengthened.								
A2.1.1	-	-	-	55,050	1,500	6,200	Y1Y2	62,750
A2.1.2	-	30,600	1,440	3,000	-	-	Y1Y2	35,040
A2.1.3	-	-	2,400	-	-	2,880	Y1Y2	5,280
A2.1.4	-	-	2,400	-	-	-	Y2	2,400
Sub Total	-	30,600	6,240	58,050	1,500	9,080		105,470
Output 2.3 Law enforcement and protection measures strengthened.								
A2.3.1	-	-	-	13,000	-	4,000	Y1	17,000
A2.3.2	-	-	24,200	-	6,000	-	Y1Y2	30,200
Sub Total	-	-	24,200	13,000	6,000	4,000		47,200
Output 3.1 Local community for a and network established and strengthened in selected communities inside PA and in the buffer zone.								
A3.1.1	-	-	-	-	-	1,800	Y2	1,800
A3.1.2	-	-	900	-	-	-	Y1Y2	900
A3.1.3	-	-	1,800	-	-	-	Y2	1,800
Sub Total	-	-	2,700	-	-	1,800		4,500
Output 3.2 CLDP carried out in the Preah Vihear Protected Forest buffer zone through pilot activity fund								
A3.2.1	-	-	3,150	-	-	14,000	Y1Y2	17,150
A3.2.2	-	-	1,650	-	-	-	Y1Y2	1,650
Sub Total	-	-	4,800	-	-	14,000		18,800
Output 3.3 Nature-based tourism activities established.								
A3.3.1	-	-	-	-	-	4,920	Y1Y2	4,920
A3.3.2	-	-	600	-	-	-	Y1	600
Sub Total	-	-	600	-	-	4,900		5,520
TOTAL	88,800	30,600	48,940	71,050	12,300	45,300		296,990

7.2.2 Yearly ITTO Budget (US\$)

ITEM	Allocation for Cambodia		
	Year 1	Year 2	Total
10 Project Personnel			
11 Project Manager, at US\$ 1,350 per m 24 mm	16,200	16,200	32,400
12 Administrative officer, office secretary and clerical assistants, US\$ 1,150 per m, 24 mm	13,800	13,800	27,600
13 TA, at US\$1,200, per m 24 mm	14,400	14,400	28,800
19 Component Total	44,400	44,400	88,800
20 Sub - contracts			
201 GIS Consultant, at US\$ 120 per day*170 days	10,200	10,200	20,400
209 Local support Staff and Field Assistance, 170 days per year, US\$ 30/day	5,100	5,100	10,200
29 Component Total	15,300	15,300	30,600
30 Duty Travel			
31 Daily Subsistence Allowance (DSA)			
31.1 PM and TA, PC 4 days per yr, US\$ 75 /day (to Thailand)	900	900	1,800
31.2 1 Key Staff, 40 days per year, US\$ 30/day	600	600	1,200
31.3 Meetings, workshops and study tour for 618 participantsUS\$ 30 /participant /day	8,370	10,170	18,540
314 20 Law Enforcement Patrol, @US\$ 1,150	11,500	11,500	23,000
32 Transport Costs			
32.1 Air- tickets for PM, TA, PC toThailand 1 trip per year, US\$ 400/trip/person	1,200	1,200	2,400
32.2 Air- tickets, vehicle for workshop and training organizers, and resource persons, U	1,000	1,000	2,000
39 Component Total	23,570	25,370	48,940
40 Capital Items			
41 1 4x4 Vehicles	25,000		25,000
42 5 Moturbikes, @US\$ 1,300	6,500	-	6,500
43 1 main field control post	17,000	-	17,000
44 2 ranger outposts, @US\$ 6,500	13,000	-	13,000
45 Capital equipment			
451 2 Desktop Computer, @US\$ 2,000	4,000	-	4,000
452 5 GPS, US\$350 / unit	1,750	-	1,750
453 2 Digital camera, @US\$ 400	800	-	800
454 GIS software + mapping data 1,500 & miscellaneous equipment 1,500	3,000	-	3,000
49 Component Total	71,050	-	71,050
50 Consumable Items			
54 Office supplies			
54.1 Purchase of documentations	800	700	1,500
54.2 Office supplies	2,400	2,400	4,800
54.3 Field Equipment & Medical Kits	3,000	3,000	6,000
59 Component Total	6,200	6,100	12,300
60 Miscellaneous			
61 Vehicle maintenance, fuel, US\$ 2,500 unit/year	2,500	2,500	5,000
62 Motorbike maintenance, fuel, US\$ 120 unit/year	600	600	1,200
62 Sundry			
62.1 Consultative Committee Meeting, 1 x2yr meetings x \$1,000	1,000	1,000	2,000
62.2 High Level TBCA Meeting	-	9,500	9,500
62.3 CLDP Pilot Activity, 7 Activities, US\$ 2,000/activity	6,000	8,000	14,000
62.4 Sign Board	4,000	-	4,000
62.5 Publications of information & conservation education material	4,000	2,720	6,720
62.6 Publications & distribution of management plan, 160 copies, US\$ 18/copy	-	2,880	2,880
69 Component Total	18,100	27,200	45,300
TOTAL	178,620	118,370	296,990
80 ITTO Monitoring,Evaluation and Administration			
81 Monitoring cost	3000	3000	6,000
82 Ex-post Evaluation cost	-	7,500	7,500
Sub - total 1	181,620	128,870	310,490
83 Administrative cost (8% of sub - total 1)	15,952	11,764	24,839
89 Component Total	197,572	140,634	335,329
99 GRAND TOTAL	197,572	140,634	335,329

7.2.3 Yearly contribution of the Government of Cambodia to the project budget (US \$)

ITEM	Allocation for Cambodia		
	Year 1	Year 2	Total
10 Project Personnel			
11 Co-project Coordinator	7,200	7,200	14,400
12 Head of protection and enforcement unit	6,000	6,000	12,000
13 Head of Protected Forest management	6,000	6,000	12,000
14 Head of community outreach	6,000	6,000	12,000
19 Component Total	25,200	25,200	50,400
20 Sub - contracts			
202 PA Management Specialist	12,000	12,000	24,000
204 Wildlife Specialist	20,000	20,000	40,000
205 Fire Ecologist	5,000	5,000	10,000
206 Rural Development Specialist	7,500	7,500	15,000
208 Conservation Education Specialist	7,500	7,500	15,000
209 Eco-tourism specialist	6,000	6,000	12,000
210 Local Support Staff and Field Assistant	30,000	30,000	60,000
211 Guide and Cook	8,000	8,000	16,000
29 Component Total	96,000	96,000	192,000
30 Duty Travel			
31 Daily Subsistence Allowance (DSA)			
311 DSA for Meetings, workshops and study tours	8,000	8,000	16,000
312 Enforcement Patrol	12,000	12,000	24,000
32 Travel within Cambodia	8,000	8,000	16,000
33 Travel to Laos and Thailand	3,000	3,000	6,000
34 Travel in-country	6,000	6,000	12,000
39 Component Total	37,000	37,000	74,000
40 Capital Items			
41 1 4x4 Vehicles	25,000		25,000
42 5 Motorbikes	6,500		6,500
43 Office Equipment	10,000	5,000	15,000
44 Land Acquisition	70,000		70,000
45 Capital equipment			
451 2 desktop Computers	5,000		5,000
452 3 Base VHF Radio	2,100		2,100
453 5 Hand Radio	1,500		1,500
454 3 Freezer & Refrigerator	9,000		9,000
455 3 Gas stove & Gas	3,000		3,000
456 3 Generators	6,000		6,000
457 5 GPS, US\$ 350 / unit	1,750		1,750
49 Component Total	139,850	5,000	144,850
50 Consumable Items			
51 Field Equipment	2,000	2,000	4,000
52 Purchase of material	2,000	2,000	4,000
59 Component Total	2,000	2,000	4,000
60 Miscellaneous			
61 Vehicle maintenance & fuel, US\$ 2,000 unit/year	2,500	2,500	5,000
62 Sundry			
621 Consultative Community Committee Meeting, 2 yr x \$10,000	10,000	10,000	20,000
623 Publication of conservation education material	6,000	6,000	12,000
626 Publications of surveys and studies results	6,000	10,000	16,000
69 Component Total	24,500	28,500	53,000
TOTAL	324,550	193,700	518,250

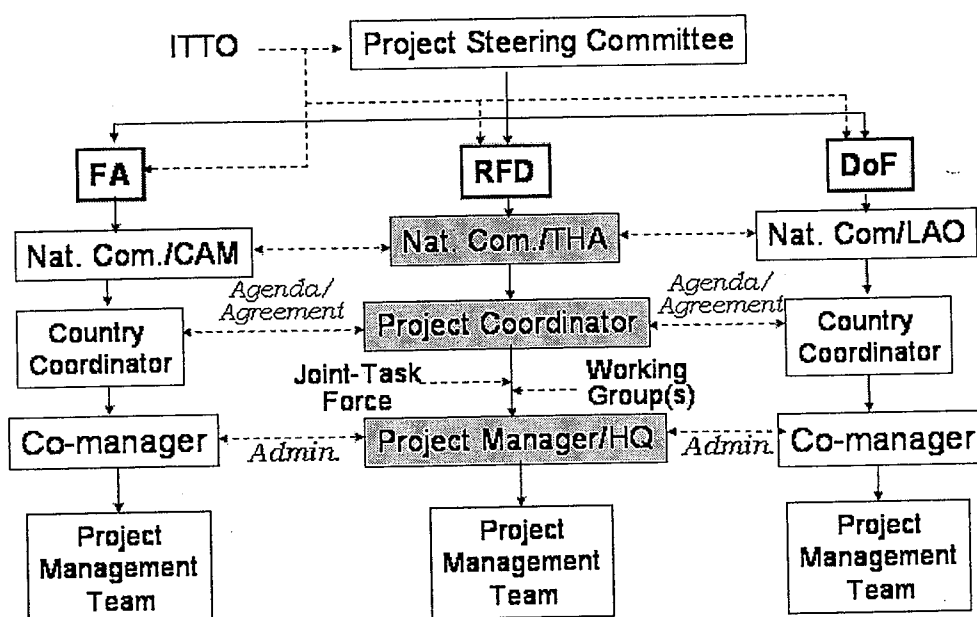
7.3 ITTO

Item		Allocation		Total
		Year 1	Year 2	
80	ITTO Monitoring, Evaluation and Administration			
81	Monitoring cost	6,000	6,000	12,000
82	Evaluation cost	-	15,000	15,000
	Sub-Total	6,000	21,000	27,000
83	Administrative cost (8%)	28,892	24,963	50,978
89	Component Total	34,892	45,963	77,978

PART III: OPERATIONAL ARRANGEMENTS

1. Management Structures

The project will be jointly implemented by the RFD of Thailand; FA of Cambodia and DoF of Lao PDR (Annex D). After signing contract with ITTO, the Project Steering Committee (PSC) will be established as an important mechanism to supervise and synthesize management guidelines of the three countries for managing the Emerald Triangle protected forests complex. The PSC members will include Director-Generals of three Departments, Project Coordinator, National Coordinators, ITTO, Project's donors and others as agreed among the three countries and ITTO. In addition, the National Coordinating Offices will be created in Cambodia and Laos to coordinate and correspond with the participating countries, while Thailand will use the existing Project Management Office at the Phatam National Park as the Project Headquarters for the Phase II. The Joint-Task Force comprising protected area officials, and/or working on particular subject e.g. information, tourism, research will be appointed to strengthen collaborative activities on the ground.



Proposed Organization Chart of the Project

Besides, the Director-General of each Department will appoint a project management team comprising the Project Manager (PM), Technical Advisor (TA) and other assistants to execute the project in accordance with the proposed organization chart and approval of ITTO. The proposed team for Thailand and Cambodia will be composed as follows:

Thailand

- Project Manager (national, 24 mm)
- Technical Advisor (national, 24 mm)
- Secretary (24 mm)
- Participatory community development and tourism consultant (national, 12 mm)
- GIS Consultant (national 12 mm)
- Wildlife Specialist (national, 6 mm)
- Forest ecologist (national, 6 mm)
- Botanist (national, 6 mm)

Cambodia

- Project Manager (national, 24 mm)
- Technical Advisor (national, 24 mm)
- GIS Consultant (170 days)

The proposed organization of Thailand and Cambodia is attached in Annex E while Terms of Reference of the key staff is in Annex F. It is proposed that the first PSC meeting will be held not later than the end of the third month after the project starting date to approve the operation plan and the terms of reference for all consultants. The PSC meeting will meet at least once a year, while the Joint Task Force and Working Groups may have more than one meeting a year. Venue and agenda for the PSC meeting will be drafted and discussed among the Country Coordinators of the three countries. In addition, Chairman of this meeting will be rotated among the three countries.

2. Monitoring, Reporting and Evaluation

Within the first 8 weeks of the project implementation, the project managers and coordinators of two countries will jointly prepare an inception report for the first meeting of the PSC and the ITTO. The project will submit the reports to in accordance with the "ITTO Manual for Project Monitoring, Review and Evaluation". These progress reports will be produced in March 2005, September 2005, and March 2006. Technical reports of consultants will be produced and will undergo in a similar distribution. A mid-term evaluation will be conducted in July-August 2005 and will give recommendations for the elaboration of the working plan. The final report will be transmitted to the ITTO not later than three months after completion.

The ITTO monitoring mission will take place in September 2005. The Governments of Thailand and Cambodia will also carry out the monitoring missions in accordance with its rules and procedures.

3. Future Operation and Maintenance

After completion of Phase II of the Project, Phase III will start and will be a harmonization of guidelines for management planning and implementation as well as a joint mechanism for ecological monitoring. The recommended programs for cooperation have been described under Part II, sub-chapter 2.3.

PART IV: TROPICAL TIMBER FRAMEWORK

1 Compliance with ITTA 1994 Objectives

The project will meet the following objectives of Article 1 of the ITTA 1994 as follows:

- (c) To contribute the process of sustainable development;
- (f) To promote and support research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests
- (i) To encourage members to develop national policies aimed at sustainable utilization and conservation of timber producing forests and their genetic resources and maintain in the ecological balance in the regions concerned, in the context of tropical timber trade.

2 Compliance with ITTO Action Plan

The project is in compliance with priorities defined under Goal 1 "Support activities to secure the tropical timber resource base" of the Committee on Reforestation and Forest Management outlined in the ITTO's Libreville Action Plan as specified in the following actions:

Action 2: Support networking and exchange of information with relevant international organizations to maintain the integrity of the resource base, including protected area networks;

Action 3: Support networking of, and exchange of information on, protected areas, in collaboration and cooperation with appropriate international organizations;

and in the following aspects of Action 7:

Encourage and assist members, as appropriate, to:

- Develop, adopt and apply forest policy and legislation to secure the forest resource base;
- Establish and secure forests (e.g. a Permanent Forest Estate) likely to remain under forest cover in the long term, including:
 - Classifying a sufficient proportion of totally protected area for conservation purposes (including three species conservation, biodiversity conservation and watershed protection).

In addition, it is compliance with Goal 2 "Promote sustainable management of tropical forest resources" as outlined under Action 10 as follows:

Action 10: Establish areas dedicated to biodiversity conservation in accordance with ITTO guidelines, including trans-boundary conservation areas, in close collaboration with other relevant organizations and bodies;

3 Compliance with ITTO Yokohama Action Plan 2002-2006

The project is in accordance with "cross cutting strategies" of the Yokohama Action Plan that requires ITTO to:

- (d) Enhance public relations, education and outreach activities in order to better raise awareness of the purpose and activities of the Organization and of the fact that sustainable forest management can be an economically, socially and environmentally viable land use;
- (k) Support demonstration and pilot projects in all areas of its supportive work, especially on regional basis

In addition, the project complies with ITTO Guidelines for the Sustainable Management of Natural Tropical Forests, Principle 7 as follows:

- The different categories to land to be kept under permanent forest area: land to be protected; land for nature conservation; land for production of timber and other forest products; land intended to fulfill combination of these objectives.

Furthermore, the project also meets the ITTO Guidelines on the Conservation of Biological Diversity in Tropical Production Forests which encourage the establishment of large undisturbed forest areas as protected areas such as national park or wildlife sanctuary.

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ANNEX A: BACKGROUND INFORMATION OF THE PPFC AND ADJOINING PROTECTED AREAS IN CAMBODIA AND LAOS PDR

A1 Location and Extent

The Phatam Protected Forests Complex is located between latitudes 14° 12.5'–15° 13.9' N and longitudes 104° 58.5'–105° 8.5' E in northeast Thailand. This protected area complex comprises the Phatam National Park, Kaeng Tana National Park, Phu Jong-Na Yoi National Park and Yot Dom Wildlife Sanctuary as well as Bun Thrik-Yot Mon Proposed Wildlife Sanctuary (Map A-1). Phatam is in the north followed by Kaeng Tana, Bun Thrik-Yot Mon, Phu Jong-Na Yoi and Yot Dom. Phu Jong-Na Yoi is the largest reserve, while the sizes of Phatam and the Bun Thrik-Yot Mon Proposed Wildlife Sanctuary are relatively equivalent (Map C-1). All together, this complex constitutes 174,100 ha and its total perimeter is 73,000 km. Approximately 317 km or 43% of the total border length adjoins Laos (298 km or 40.96%) and Cambodia (18 km or 2.5%). To the west of PPFC is the Phouxeingthong National Biodiversity Conservation Area in Laos, covering approximately 120,000 ha, and to the south of Yot Dom Wildlife Sanctuary is the Protected Forest for Conservation of Genetic Resources of Plants and Wildlife in Preah Vihear Province, covering approximately 190,000 ha. Key features of the PPFC area are summarized in Tables A1-1, and A1-2.

Table A1-1. Summary of key features of the PPFC Project areas

Name	Established	Area (ha)	Official area (ha)	Perimeter (km)	No. of ranger stations	No. of officials
Phatam	31 Dec 91	35,316	34,000	242.67	5	3
Kaeng Tana	13 Jun 81	8,462	80,000	62.52	5	2
Phu Jong-Na Yoi	1 Jun 87	69,738	68,600	215.88	6	1
Yot Dom	11 Oct 77	23,593	22,540	88.21	4	1
Bun Thrik-Yot Mon	In process	36,586	40,960	186.15	1	1

Source: Royal Gazettes.

Table A1-2. Analysis of protected area boundaries and shape

Name	Area (ha)	Perimeter (km)	Country boundary	Shared with other PAs	Adjacent villages	Shape index 1/
Phatam	35,316	242.67	63.32 (26.92%)	0.00 (0.00%)	177.35 (73.08%)	3.64
Kaeng Tana	8,462	62.52	29.96 (47.92%)	0.00 (0.00%)	32.56 (52.08%)	1.92
Phu Jong-Na Yoi	69,738	215.88	93.87 (43.48%)	33.43 (15.48%)	88.58 (41.03%)	2.31
Yot Dom	23,593	88.21	33.21 (37.65%)	26.11 (29.60%)	28.90 (32.76%)	1.62
Bun Thrik-Yot Mon	36,586	186.15	96.40 (51.79%)	8.87 (4.76%)	80.88 (43.45%)	2.75

1/ : shape index = perimeter / 2 ($\sqrt{\pi \times a}$) (McGargal & Marks 1995)

Based on interpretation of Landsat satellite image in 2002 and field survey conducted during the project's phase I, the PPFC landscape contains 3 main vegetation types i.e., dry evergreen forest, mixed deciduous forest, and dry dipterocarp forest. More than 288 tree species are identified (Trisurat, 2003b; Marod, 2003). At least 49 mammal, 145 bird, 30 reptile and 13 amphibian species are recorded in Thailand's protected areas but large wildlife species such as the wild elephant, banteng, freshwater crocodile and tiger are observed only along the national borders and seasonally migrate across the tri-national boundaries (Bhumpakphan, 2003). In addition, forest in buffer zone of Thailand's protected areas is being encroached for agricultural practices.

Cambodia is known to have some of the most extensive unfragmented natural forests of Asia. Within Cambodia, the Northern Plains contain the largest number of Globally Threatened species of any landscape. The area is either a last refuge for – or maintains a key population of – 16 Critically Endangered and Endangered species from the IUCN Red List. Due to the highly seasonal nature of the environment, key species are dependent on strictly limited resources, such as permanent waterbodies and upland forest patches, that are small, localized and especially vulnerable to disturbance. The main globally significant biodiversity value of the Northern Plains reside in its populations and unique assemblages of large mammals and water birds.

The geographical locations of the protected areas are described as follows:

A1.1 The Phatam National Park

Phatam was established as the 74th national park of Thailand on 31 December 1991. It is situated between latitudes 15° 22.9'–15° 45.9' N and longitudes 105° 28.2'–105° 38.5' E at Amphoes (villages) Khong Chiam and Si Mueang Mai of Ubon Ratchathani Province. Its location lies between geo-referenced x–y coordinates (550438, 1700591) at the lower left and x–y coordinates (568686, 1742946) at the upper right (Map C-2). Based on GIS database, the park covers an area of 35,316 ha (official area is 34,000 ha or 212,500 rai) and its total perimeter is 242.67 km length. The shape index of Phatam is equal to 3.64 indicating the elongated pattern of the park (Tables A1-1 and A1-2). About 27% of its border is connected to the Mae Khong (or Mekong) River and 73% is adjacent to villages. Therefore the potential edge effect from the local communities on the park is ranked the highest among the protected areas in this complex.

A1.2 The Kaeng Tana National Park

Kaeng Tana was gazetted as the 33rd national park of Thailand on 13 June 1981. It is situated between latitudes 15° 13.9'–15° 13.19.4' N and longitudes 105° 28'–105° 35.8' E at Amphoes Khong Chiam and Phibun Mangsahan of Ubon Ratchathani Province. The geographical extent of the park lies between geo-referenced x–y coordinates (550244, 1683872) at the lower left and x–y coordinates (564019, 1694045) at the upper right in UTM system Zone 48. According to the GIS database, the park contains an area of 8,462 ha (official area 8,000 ha or 50,000 rai), and its perimeter is 62.52 km. The shape index of the park is 1.92 indicating a circle or simple shape. Thus the percentage of physical core area is relatively high compared to other protected areas in the PPFC. About 52% of the park boundary is adjacent to local communities and 48% is attached to country boundaries, including the Mae Khong River to the north and mountain ridge to the east (Map C-3).

A1.3 The Phu Jong-Na Yoi National Park

Phu Jong-Na Yoi was declared the 53rd national park of Thailand on 1 June 1987. The park is situated between 14° 12.9'–14° 37' N and 105° 04.4'–105° 32.6' E or geo-referenced x–y coordinates between (507800, 1571514) at the lower left and (558488, 1615968) at the upper right in UTM Zone 48. GIS database indicates that the park covers an area of 697.38 km² (official area is 686 km² or 428,750 rai). The park overlaps Amphoes Bun Thrik, Na Chaluai and Nam Yuen of Ubon Ratchathani Province. To the north is the Bun Thrik-Yot Mon Proposed Wildlife Sanctuary, to the south is Yot Dom and to the east is Laos. The perimeter of the park is 215.88 km length and its shape is relatively long (shape index = 2.31) (Map C-4).

A1.4 The Yot Dom Wildlife Sanctuary

Yot Dom was established as the 13th wildlife sanctuary of Thailand on 11 October 1977. The sanctuary is located between latitudes 14° 12.5'–14° 27.4' N and longitudes 104° 58.5'–105° 07' E. Its geographical location lies between geo-referenced x–y coordinates (497320, 1570594) at the lower left, and x–y coordinates (512559, 1598135) at the upper right in UTM system Zone 48. It covers an area of 23,594 ha (official area is 22,540 ha or 140,845 rai) including amphoe Nam Yuen of Ubon Ratchathani Province. The total perimeter of the sanctuary is 88.207 km. To the west of the sanctuary, its periphery is attached to the Cambodian border and to the right it adjoins the Phu Jong-Na Yoi National Park. About 29 km or 32.76% is connected to agricultural area and human settlements. The shape of Yot Dom is generally simple or round, and its shape index is the lowest (1.62) among the five protected areas in this complex (Map C-5).

A1.5 The Bun Thrik-Yot Mon Proposed Wildlife Sanctuary

Bun Thrik-Yot Mon is being proposed as a new wildlife sanctuary in the PPFC. It is located to the north of the Phu Jong-Na Yoi National Park. Geographically, Bun Thrik is situated between latitudes 14° 37.7'–15° 04.9' N and longitudes 104° 25.7'– 105° 37.7' E. or geo-referenced x–y coordinates (546216, 161531) at the lower left, and x–y coordinates (567549, 1667339) at the upper right in UTM system Zone 48. It covers an area of 40,960 ha or 256,000 rai. The total length of the sanctuary's boundary is 186.15 km. To the south, it adjoins the Phu Jong-Na Yoi National Park, to the right is the Laotian border and to the west of the sanctuary are agricultural area and human settlements. The shape of Bun Thrik is relatively linear, similar to that of the Phu Jong-Na Yoi (Map C-6).

A1.6 Protected Forest for Conservation of Genetic Resources of Plants and Wildlife in Preah Vihear Province

In July 2002, the RGC established the Preah Vihear Protected Forest (190,027 ha) Mondulkiri Protected Forest (429,438 ha), and the Cardamom Protected Forest (401,313 ha). The Preah Vihear Protected Forest is located in Preah Vihear Province in the Northern Plains of Cambodia, west of the Mekong River, and borders both Thailand and Laos (Map C-7).

ANNEX B: SUMMARY OF THE PPFC LONG-TERM MANAGEMENT PLAN

B1 The Long-term and Medium-term Working Plans

The management plan covers a period of 20 years from 2004 to 2023. It constitutes a framework for long-term conservation objectives. The plan is a flexible document that will allow taking into account new data and to adjust to new needs. The plan describes the overall management objectives and specific management objectives to promote area management units and assign specific functions to land units within the respective protected areas.

The medium-term working plan spans a period of three years from 2004 to 2006. It constitutes at the same time the project document for its second phase. The working plan incorporates concrete action for the enhancement of trans-boundary conservation. It describes the activities that will be carried out in each protected area over the period 2004–2006 which will correspond to Phase 2 of the project. For each protected area, the working plan will be implemented in Phase 2 through an annual operational plan.

B2 Management Objectives and Zoning

As trans-boundary protected areas with PPFC, their overall management objectives should include: to support long-term cooperative conservation of biodiversity, ecosystem services, and natural and cultural values across boundaries; to share biodiversity and cultural resource management skills and experience, including cooperative research and information management; and to enhance the benefits of conservation and promote benefit-sharing in trans-boundary protected areas.

These overall objectives will be used as direction for the management of all protected areas within the PPFC over a period of at least 20 years (2004–2023). Consistent with the overall management objectives, the specific objectives for area management within a period of 3 years (2004–2006) are as follows:

1. To initiate and set up the foundation for long-term cooperative conservation of biodiversity, ecosystem services, and natural and cultural values, and to strengthen the protection of natural resources across boundaries.
2. To strengthen the technical information base, organization and human resources, public relations and participation mechanism at each individual protected area within the PPFC.
3. To share biodiversity and cultural resource management skills and experience, cooperative research and scientific studies, including ecotourism promotion and the generation of tourism income to the local communities.

The management zoning plan of the PPFC responds not only to the management objectives of each protected area but also supports biodiversity conservation across the country border lines. Long-term survival of wildlife species in the PPFC complex is heavily dependent on cooperation of multi-stakeholders beyond the protected area boundary of Thailand and on collaboration among Thailand, Cambodia and Laos. For instance, the results from GIS modeling show that suitable habitats for several focal species are located along the borders and wildlife seasonally migrate from place to place. Therefore defining proper ecological management zones is vital to conserve biodiversity in the PPFC. The objectives of zoning thus include:

- to provide protection of critical or representative habitats, ecosystem and ecological processes of the PPFC complex;
- to protect the natural and/or cultural qualities of the PPFC while allowing reasonable human uses;
- to facilitate migration and dispersal of focal species in fragmented landscapes.

The management zones of the PPFC (Map C-8) are described as follows:

Core zone. This zone covers an area of 294,571 ha or 27.53 percent of the total PPFC landscape located mostly in two clusters: Phuoxiengthong NBCA plus Phatam in the north, and along the border starting from Bun Thrik-Yot Mon to Yot Dom in the east and south of the PPFC. The latter area contains a higher proportion of core area. Considering the five protected areas in Thailand, Phu Jong-Na Yoi covers the highest percentage (79.08%) of core area, Yot Dom is the second (76.12%) and Kaeng Tana is the least (7.45%) due to most areas being disturbed either by humans or grazing. It should be noted that the core area in Kaeng Tana is very small because the zoning scheme is targeted for trans-boundary biodiversity conservation at landscape level, thus the designation of this study is not for management zoning of individual protected area.

Buffer zone. Buffer zone covers the remaining forest area in the PPFC and degraded areas as well as agriculture inside the protected areas. The total buffer zone in the PPFC landscape covers an area of 39,1259 ha or 36.57 percent. A large patch is situated to the west of Phatam and to the west of Bun Thrik-Yot Mon and to the east in Laos. Other areas are surrounded the core zone. Approximately 75% of Phatam and 92% of Kaeng Tana are recognized as buffer zone which encourages wildlife migration between Laos and Thailand in the northern PPFC landscape. The forested area in Laos to the east of Bun Thrik-Yot Mon, where legal logging is practised, is also classified as buffer zone.

The buffer zone can be classified into two subzones for practical implementation where it covers an extensive area. The primary buffer zone is the area surrounding the core area inside the protected area boundary. Management of this zone is aimed at research, training, education and ecotourism. Secondary buffer or transition zone is the remaining buffer zone outside the protected area. Activities in this zone may include agroforestry and collection of mushrooms, bamboo shoots as well as grazing.

Corridor. Local experts and the Wildlife Ecology Consultant confirm that there are at least four migration routes for wildlife crossing the borders of the three countries: northeastern Phatam–northwestern Phuoxiengthong; southern Phatam–southern Phuoxiengthong; eastern Bun Thrik–Laos, southeastern Phu Jong–Laos; and adjoining Yot Dom and Phu Jong–Cambodia. The ecological zone map shows that the boundary of Kaeng Tana does not adjoin Phatam and Bun Thrik-Yot Mon; therefore it is proposed that conservation corridors between southern Kaeng Tana and northern Bun Thrik-Yot Mon be established in the southern gap to link fragmented landscapes. This corridor covers remnant vegetation of about 17 km length. At the same time, rehabilitation should be conducted and wildlife migration monitored.

The remaining areas in the PPFC landscape dominated by extensive agriculture and human settlement are classified as **landscape matrix**. The legal status of this land is either national reserved forest or private - owned land. The PPFC should promote community-based conservation activities that lead to biodiversity-friendly land and water uses such as activities related to ecotourism and para rubber plantation instead of cashcrop. In addition, it is essential to enhance community awareness and their participation in the TBCA in the long run.

B3 Management Programs

Management programs under the long-term management plan (2004–2023) consist of six programs. These include 1) Natural Resource Conservation and Management Program; 2) Recreation and Ecotourism Management Program; 3) Integrated Community Development Program; 4) Organization and Human Resource Development Program; 5) Research Program; and 6) Trans-boundary Cooperation Program. The annual operational plan during the first 3 years (2004-2006) outlined in the working plan could be summarized in Table B1-1.

Table B1-1. Summary of management activities under each management program proposed for annual operation during 2004–2006

▪ **Natural Resource Conservation and Management Program**

Project / Management activity	Year of operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Demarcating and mapping all protected areas	X	X		DoNP	FA	
2. Strengthening protected area management by allocating more equipment and staff	X	X		DoNP	FA	
3. Trans-boundary co-patrolling in critical habitats and control over wildlife trade	X	X	X	DoNP, RTA, CITES	FA, BPP, CITES	
4. Strictly controlling the carrying of firearms into the protected areas	X	X	X	DoNP, Police	–	
5. Raising awareness in local people on the environmental impact from unsustainable utilization of natural resources	X	X	X	DoNP	FA	
6. Cooperating with related stakeholders to share information to prevent and control forest fire	X	X	X	DoNP	FA	
7. Strictly controlling the livestock within the protected areas	X	X	X	LD, DoNP		
8. Rehabilitating degraded forests within the protected areas and strictly controlling encroachment and area expansion	X	X	X	DoNP	FA	
9. Improving quality of wildlife habitats and the necessities for their survival	X	X	X	DoNP	FA	

*DoNP=Department of National Park, Wildlife and Plant Conservation

*RTA=Royal Thai Army

*BPP=Border Patrol Police

*FA=Forestry Administration

*LD=Livestock Department

*CITES=Convention on International Trade in Endangered Species of Wild Fauna and Flora

Table B1-1 (Cont'd):

▪ Recreation and Ecotourism Management Programme

Projects / Management activity	Year of operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Developing sightseeing, boating and rafting activities along the Mekong River to enhance recreation and ecotourism	X	X	X	TAT, DoNP, PS	—	
2. Promoting jungle trekking	X	X	X	TAT, DoNP, PS	FA, PS	
3. Promoting home-stay for tourists	X	X	X	TAT, DoNP, PS	FA, PS	
4. Developing tourism and general nature-based recreation activities in national parks	X	X	X	TAT, DoNP, PS	FA, PS	
5. Strictly protecting historical and cultural sites in protected areas	X	X	X	FAD, DoNP	FA, MoC	
6. Improving interpretation programmes in both personal and non-personal media for educational and recreational activities	X	X		TAT, DoNP	FA, PS	

* TAT=Tourism Authority of Thailand
 *DoNP=Department of National Park, Wildlife and Plant Conservation

*PS=Private Sector

*FAD=Fine Arts Department
 *FA=Forestry Administration

*MoC=Ministry of Culture

Table B1-1 Cont'd):

▪ Integrated Community Development Programme

Project / Management activity	Year of operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Organizing meetings and workshops among officers, local communities and NGOs in biodiversity conservation	X	X	X	DoNP, CbOs, NGOs	FA, NGOs	
2. Establishing and strengthening capacity of local committees/volunteers to facilitate biodiversity conservation	X	X	X	DoNP, CBOs, NGOs	FA, NGOs	
3. Encouraging and promoting sustainable agriculture and agroforestry practices in buffer zones of the protected areas	X	X	X	DoA, DoNP, RFD	FA, MAFF, NGOs	
4. Developing regulations and criteria on appropriate access to non-timber forest products	X			DoNP	FA	

*DoNP=Department of National Park, Wildlife and Plant Conservation Organizations
 *NGOs=Non-Governmental Organizations

*MAFF=Ministry of Agriculture, Forestry and Fishery

*FA=Forestry Administration

*DoA=Department of Agriculture

*CbOs=Community-based

*RFD=Royal Forest Department

Table B1-1 (Cont'd):

▪ Organization and Human Resource Development Programme

Project / Management activity	Year of operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Publicizing the value of biodiversity via mass media	X	X	X	DoNP	FA	
2. Establishing reward system for outstanding conservation efforts	X	X	X	DoNP	FA	
3. Training protected area staff at operational level in biodiversity management	X	X	X	DoNP , Univ.	FA , Univ.	
4. Conducting training of the local people on sustainable livelihood practices and basic biodiversity conservation	X	X	X	DoNP, NGOs	FA , NGOs	
5. Providing training in ecotourism management to protected areas staffs and concerned parties	X	X	X	TAT, DoNP	FA, MoT	

*DoNP=Department of National Park, Wildlife and Plant Conservation

*Univ.=Universities

*NGOs=Non-Governmental Organizations

* TAT=Tourism Authority of Thailand

*FA=Forestry Administration

*MoT=Ministry of Tourism

Table B1-1 (Cont'd):

▪ Research Programme

Project / Management activity	Year of operation			Responsible agencies *		Budget (US \$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Conducting joint research on herbal and medicinal plants, rare and endangered species, edible and commercial species	X	X	X	DoNP, RFD, Univ. , RI	FA, Univ. , RI	
2. Conducting joint research on ecology, habitat uses and conservation status of key species : <ul style="list-style-type: none"> - Tiger - Leopard - White-winged duck - Elephant - Water birds (stork, crane, ibis) - Fresh-water crocodile - Kouprey (<i>Bos sauveli</i>) - Eld's deer - Vultures 	X	X	X	DoNP, Univ., RIs	FA, Univ. , RIs	

*DoNP=Department of National Park, Wildlife and Plant Conservation
 *Univ.=Universities
 *RIs=Research Institutes

*FA=Forestry Administration *RFD=Royal Forest Department

Table B1-1 (Cont'd):

▪ Research Program (Cont'd)

Project / Management activity	Year of Operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
3. Conducting research on status and dynamics of land use and natural resource management in and around protected areas	X	X	X	DoNP, Univ., RIs	FA, Univ., RI	
4. Conducting research on the existing species and genetic resources in and around the protected areas	X	X	X	DoNP, Univ., RI	FA, Univ., RI	
5. Conducting research on ecological threats to biodiversity conservation	X	X		DoNP, Univ., RIs	FA, Univ., RIs	

*DoNP=Department of National Park, Wildlife and Plant Conservation
 *Univ.=Universities
 *RIs=Research Institutes

*FA=Forestry Administration *RFD=Royal Forest Department

Table B1-1 (Cont'd):

▪ Trans-boundary Cooperation on Strengthening Tri-national Exchange Mechanism Programme

Project / Management activity	Year of operation			Responsible agencies *		Budget (US\$)
	1st	2nd	3rd	Thailand	Cambodia	
1. Organizing mutual visits of protected areas staffs and local people to exchange skills, experience and information	X	X	X	DoNP, CbOs, NGOs	FA, NGOs	
2. Conducting study tours on biodiversity conservation	X	X	X	DoNP, CBOs, NGOs	FA, NGOs	
3. Conducting workshops on law enforcement and international conventions related to biodiversity conservation (e.g. CITES, CBD, RAMSAR)*		X	X	DoNP, CBOs, ITTO , NGOs	FA, NGOs	
4. Establishing a networking system to coordinate access to and transfer of information and technologies related to biodiversity	X	X	X	DoNP, RIs, Univ.	FA, RIs, Univ.	

*DoNP=Department of National Park, Wildlife and Plant Conservation

*FA=Forestry Administration

*CbOs=Community-based Organizations

*NGOs=Non-Governmental Organizations

*RAMSAR=RAMSAR Convention

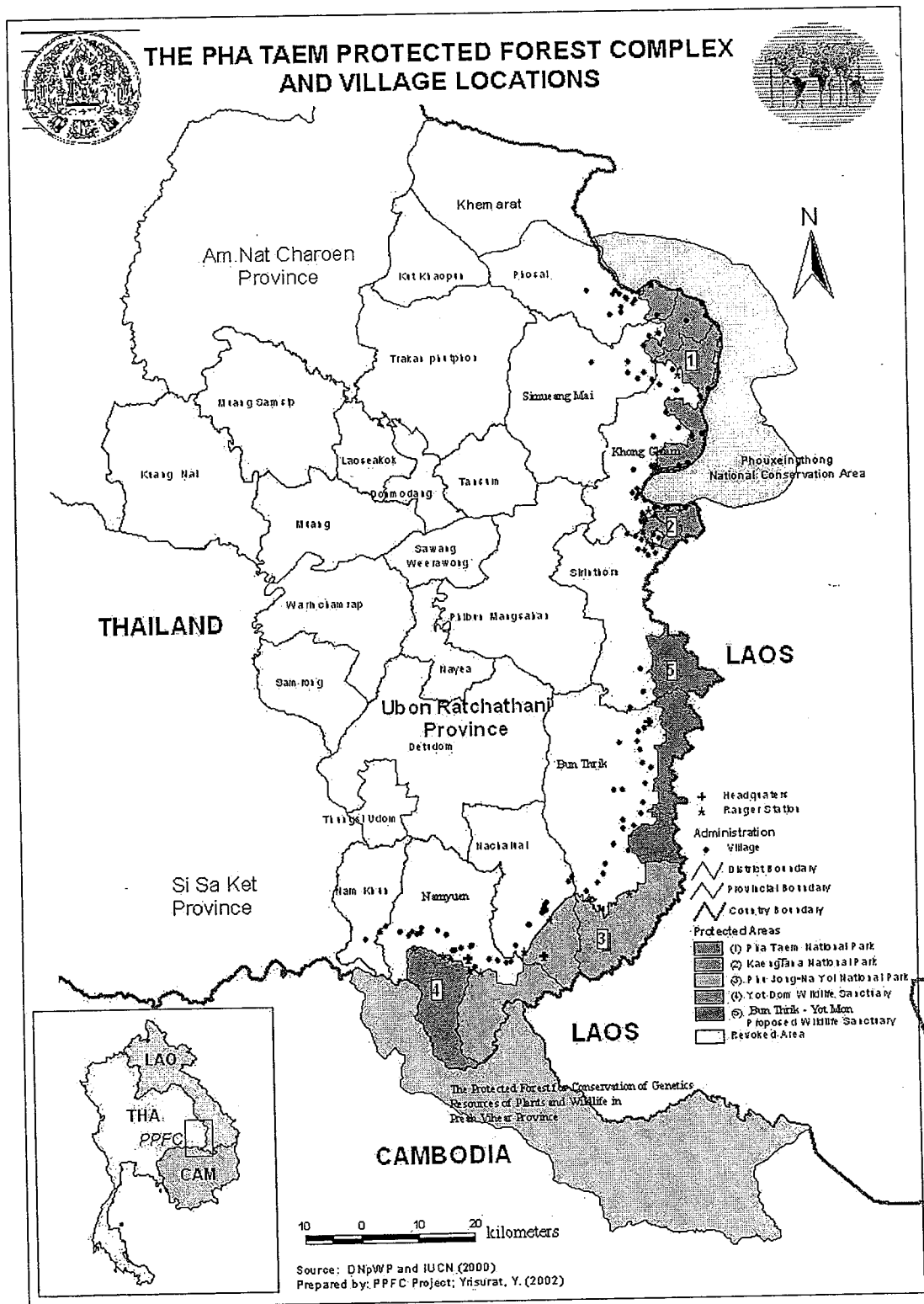
*RIs=Research Institutes

*Univ.=Universities

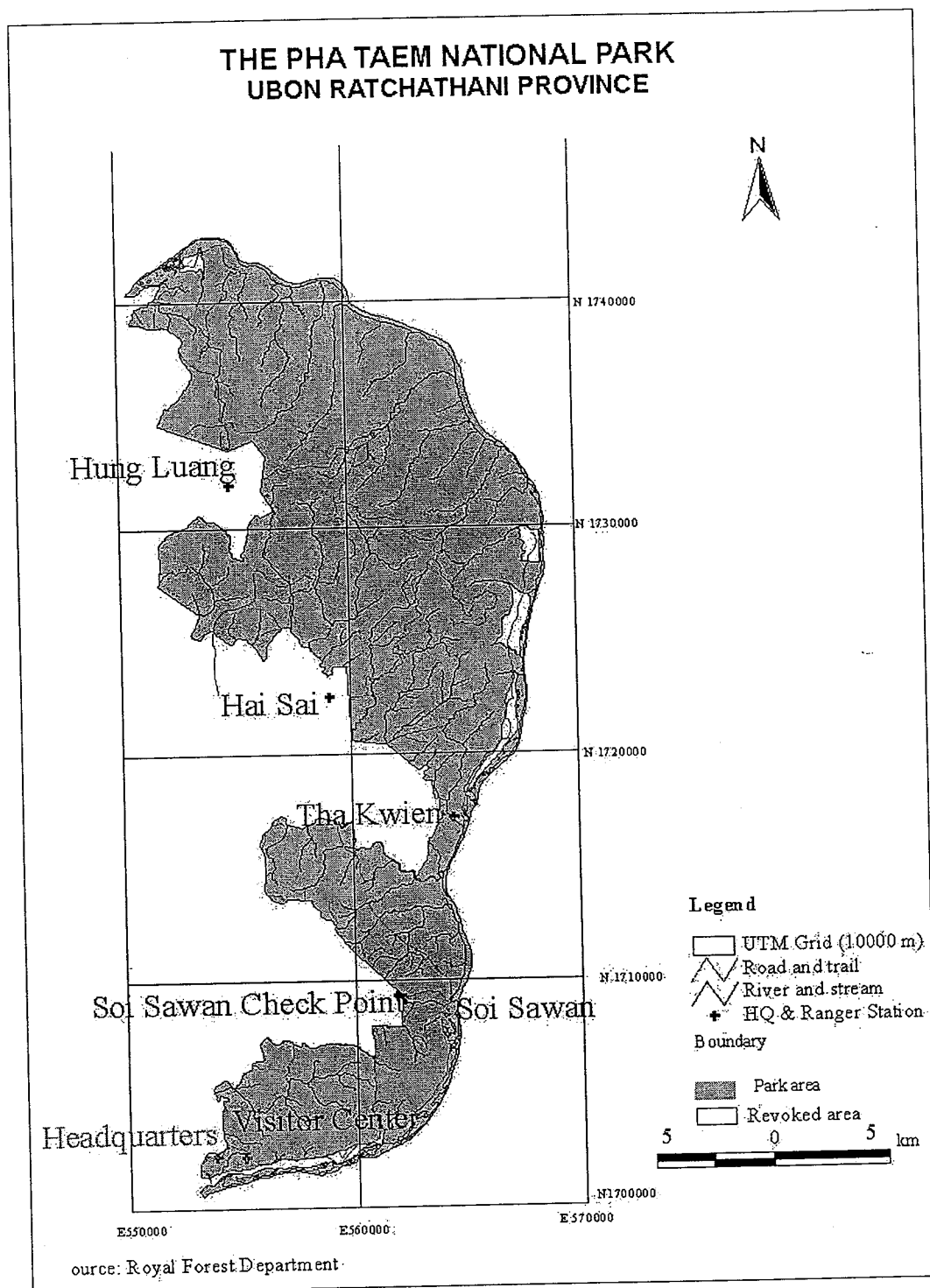
*CITES=Convention on International Trade in Endangered Species of Wild Fauna and Flora

*CBD=Convention on Biological Diversity

ANNEX C MAPS

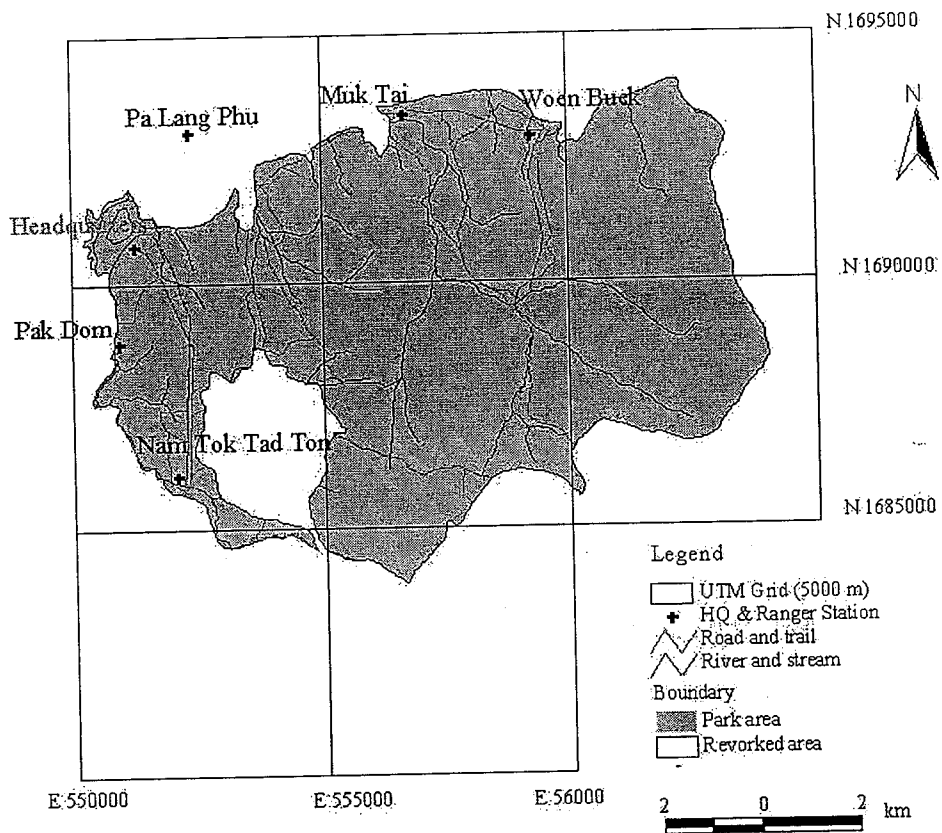


Map C-1-. Location of the Phatam Protected Forest Complex and nearby conservation areas



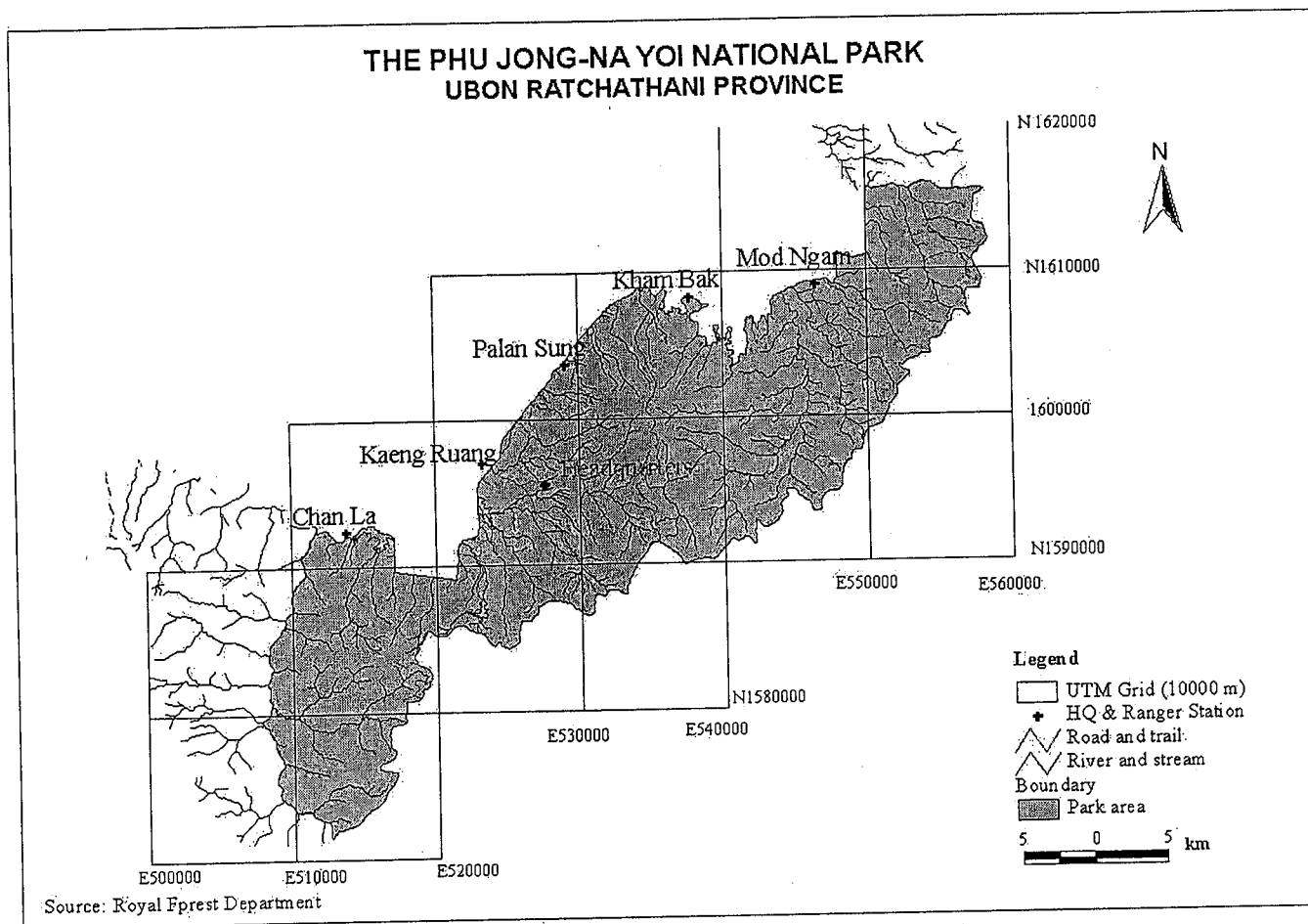
Map C-2. Geographical location of the Phatam National Park, Ubon Ratchathani Province

THE KAENG TANA NATIONAL PARK UBON RATCHATHANI PROVINCE

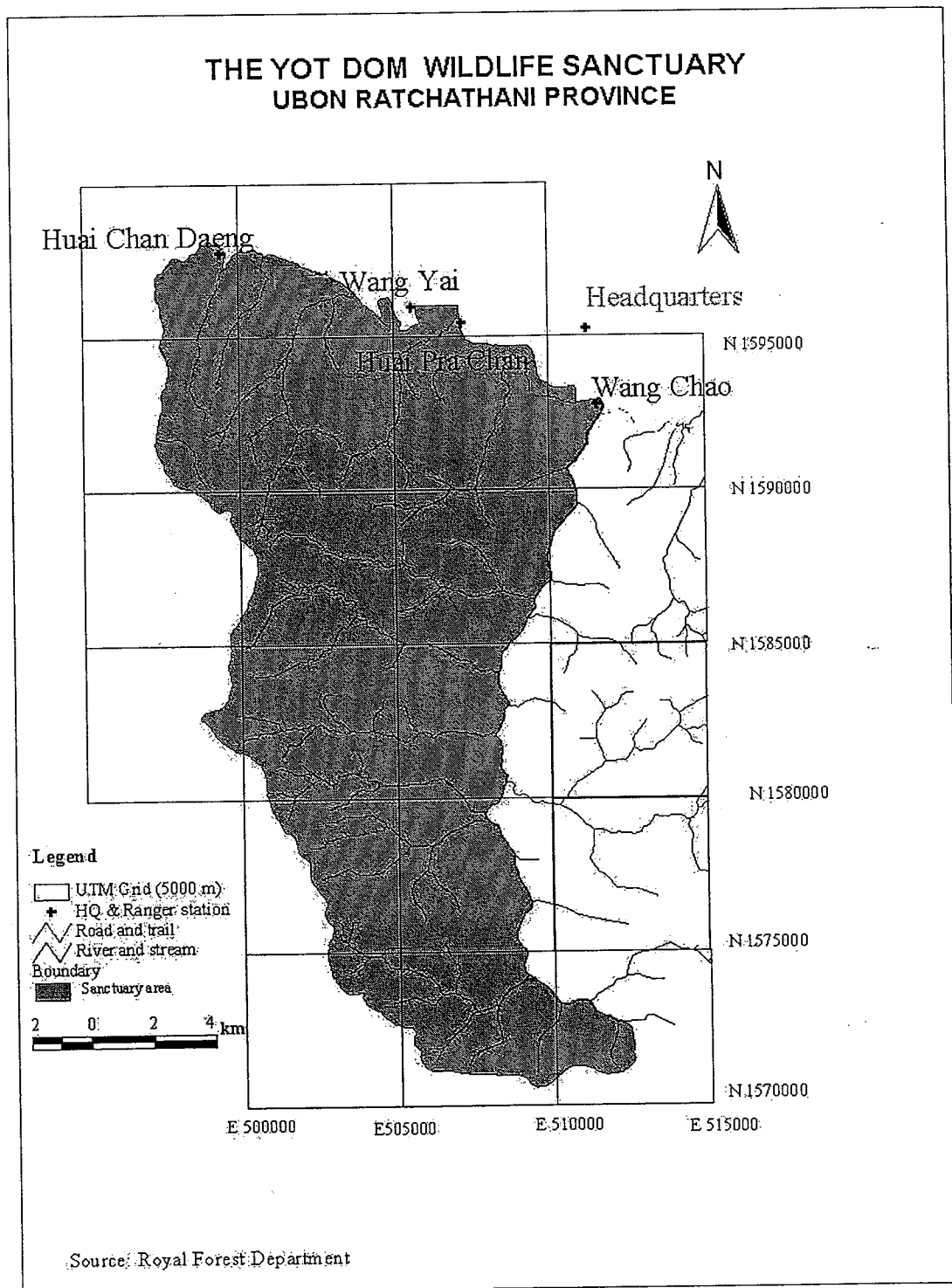


Source: Royal Forest Department

Map C-3. Geographical location of the Phatam National Park, Ubon Ratchathani Province

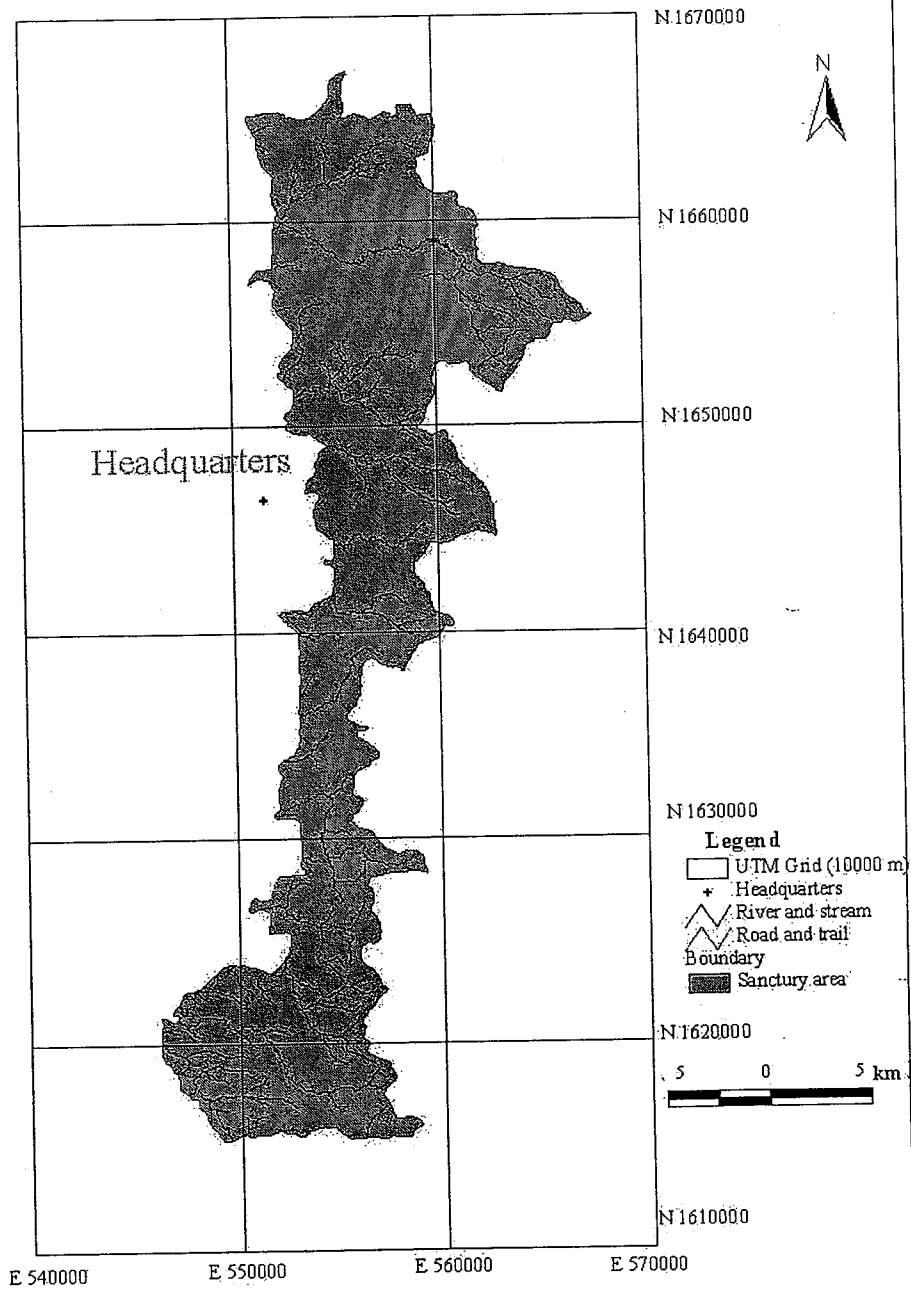


Map C-4. Geographical location of the Phu Jong-Na Yoi National Park, Ubon Ratchathani Province



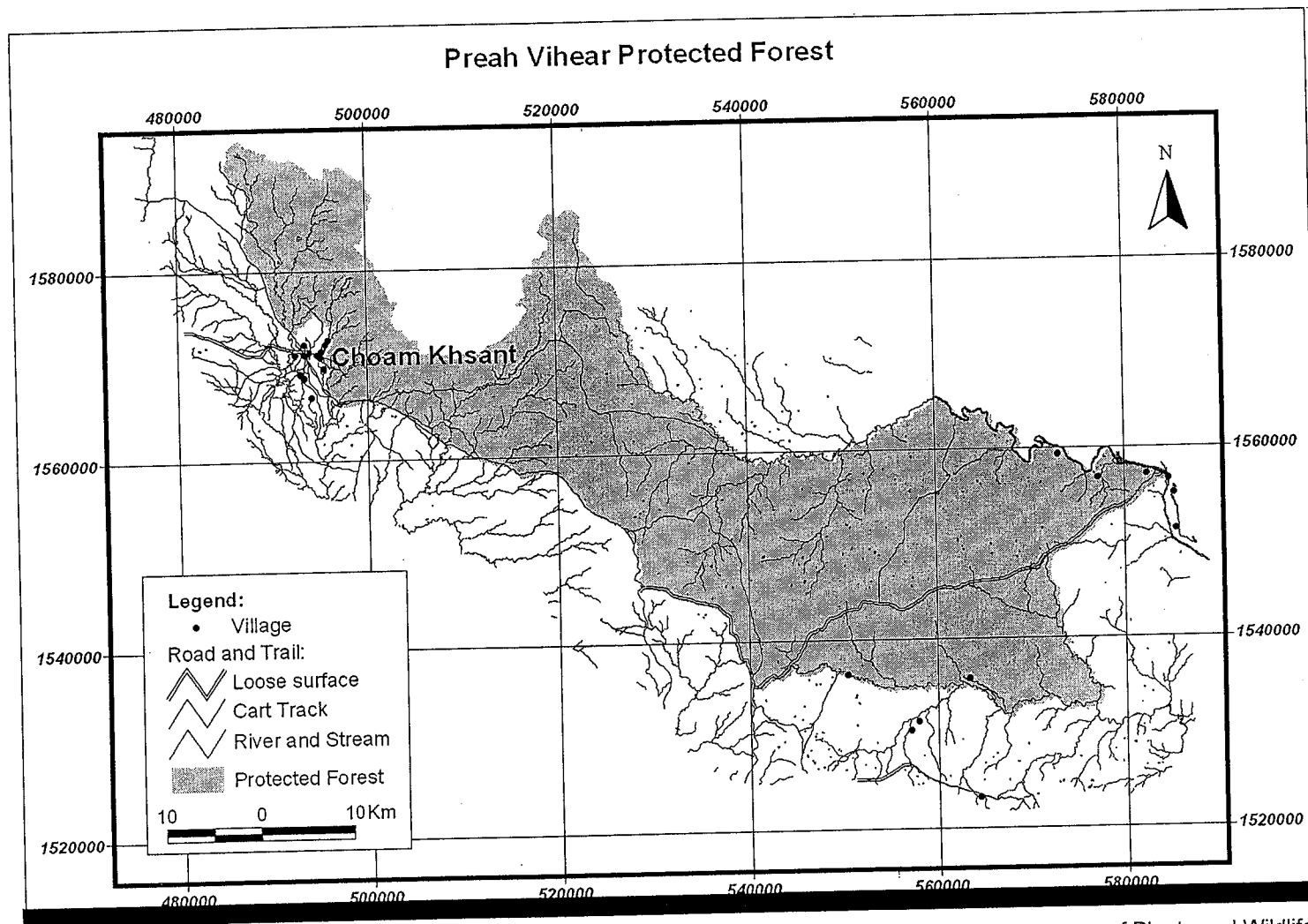
Map C-5. Geographical location of the Yot Dom Wildlife Sanctuary, Ubon Ratchathani Province

THE BUN THRIK-YOT MON PROPOSED WILDLIFE SANCTUARY UBON RATCHATHANI PROVINCE



Source: Royal Forest Department
Produced by: Forestry Research Center, KUFF (2002)

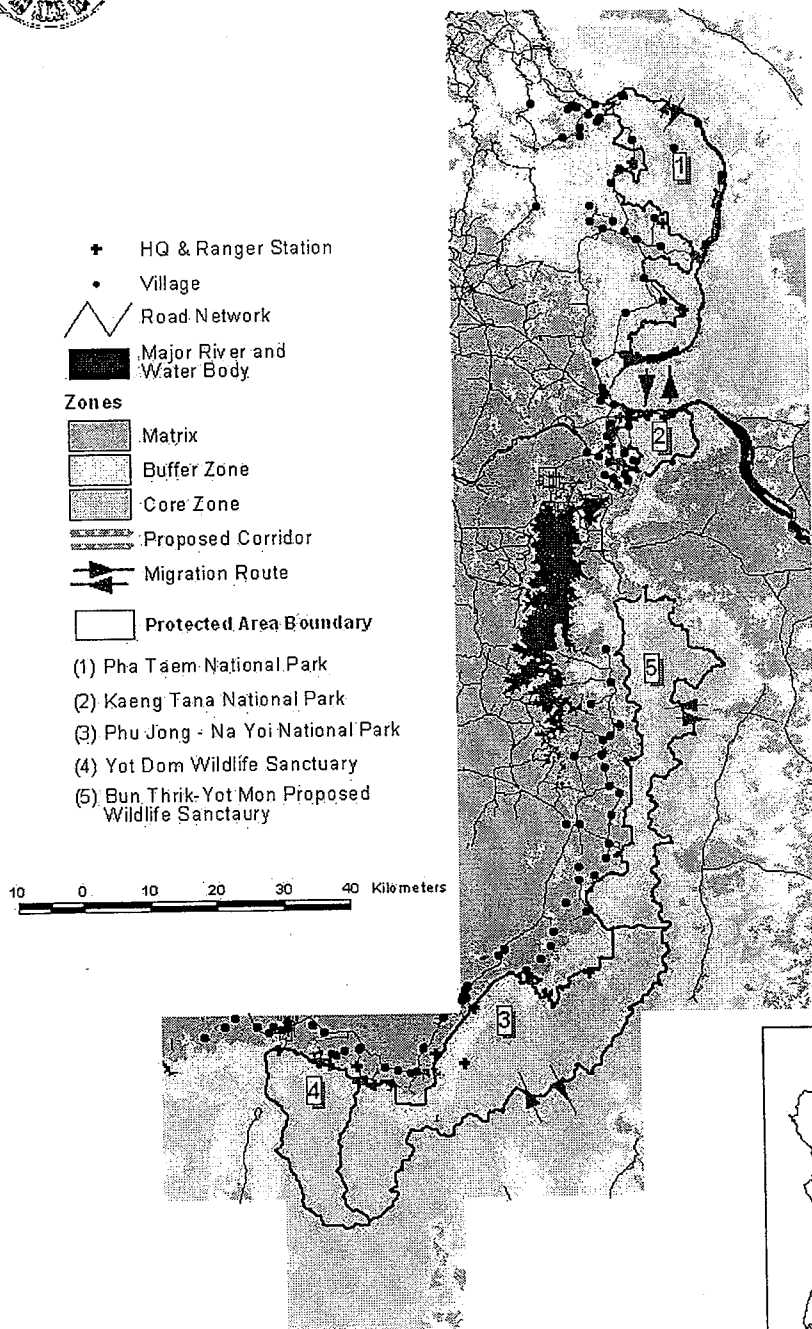
Map C-6. Geographical location of the Bun Thrik-Yot Mon Proposed Wildlife Sanctuary, Ubon Ratchathani Province



Map C-7. Geographical location of the Protected Forest for Conservation of Genetic Resources of Plants and Wildlife in Preah Vihear Province



ECOLOGICAL MANAGEMENT ZONES Pha Taem Protected Forest Complex



Sources: Consultation With Multi-stakeholders
Analysed & Prepared by: PPFC Project, Trisurat (2003)

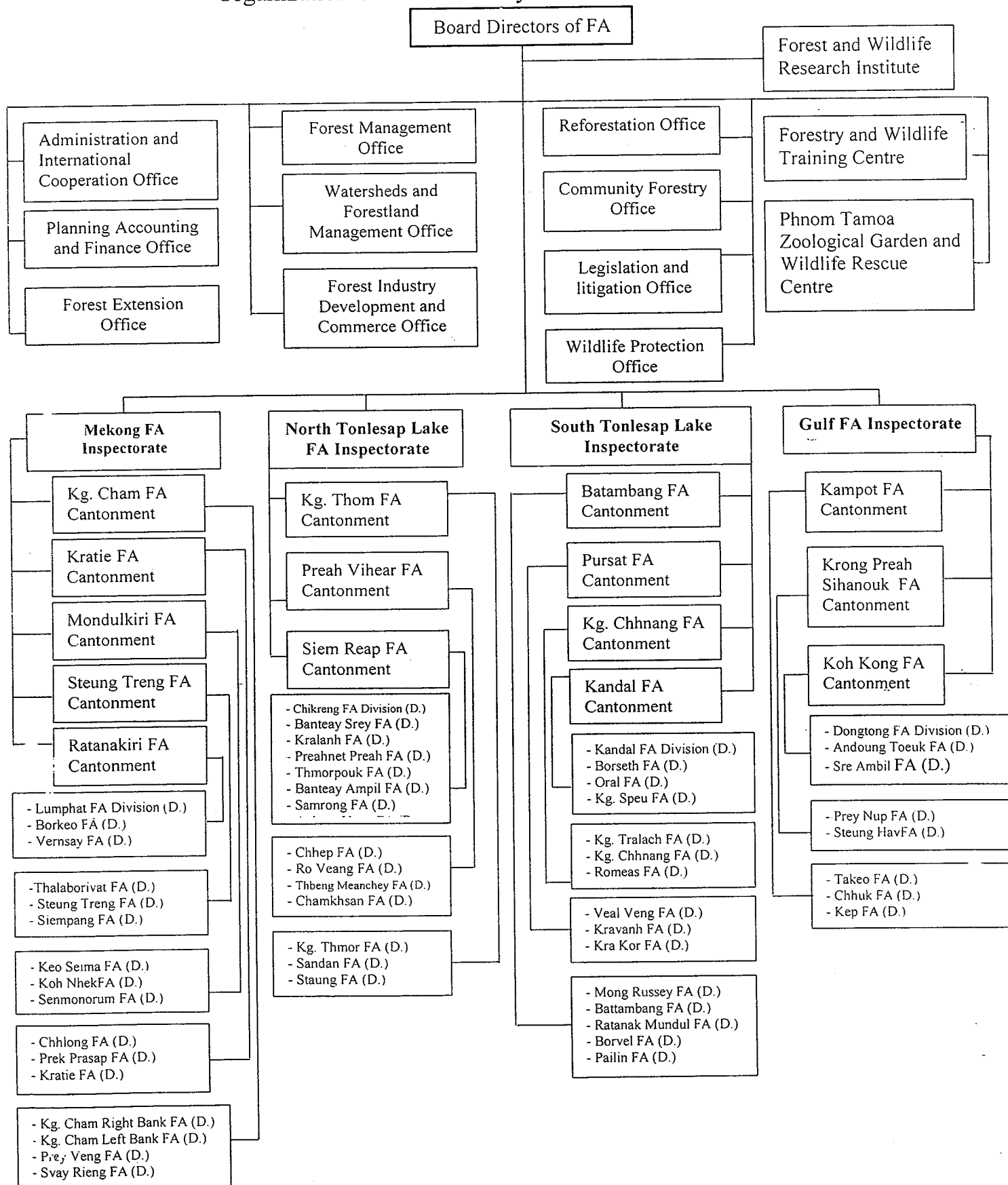
Map C-8. Ecological management zones of the PPFC trans-boundary biodiversity conservation area

ANNEX D- PROFILE OF THE EXECUTING AGENCIES IN THAILAND AND CAMBODIA

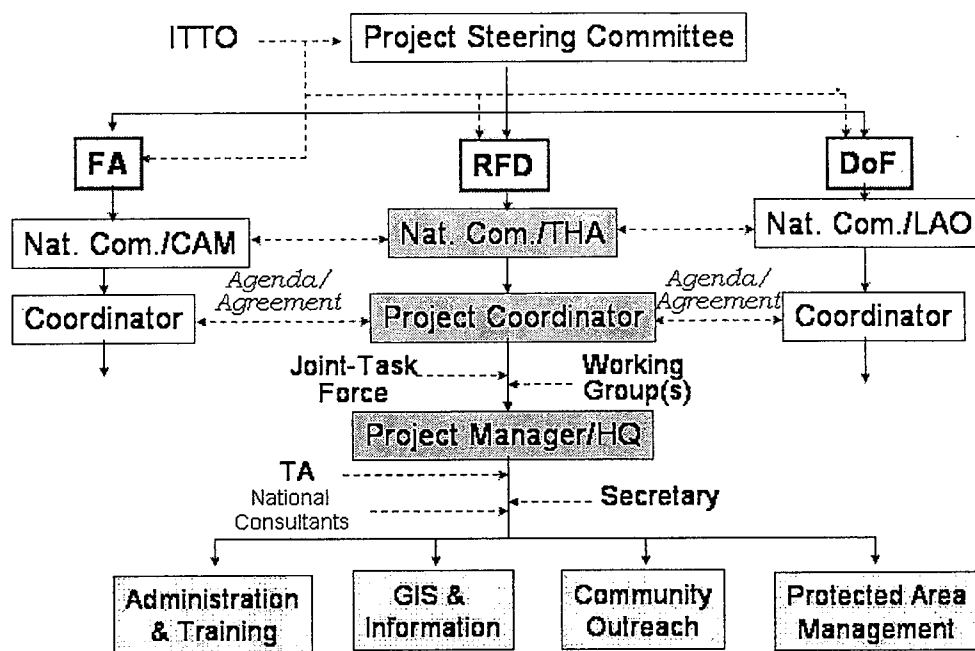
Thailand



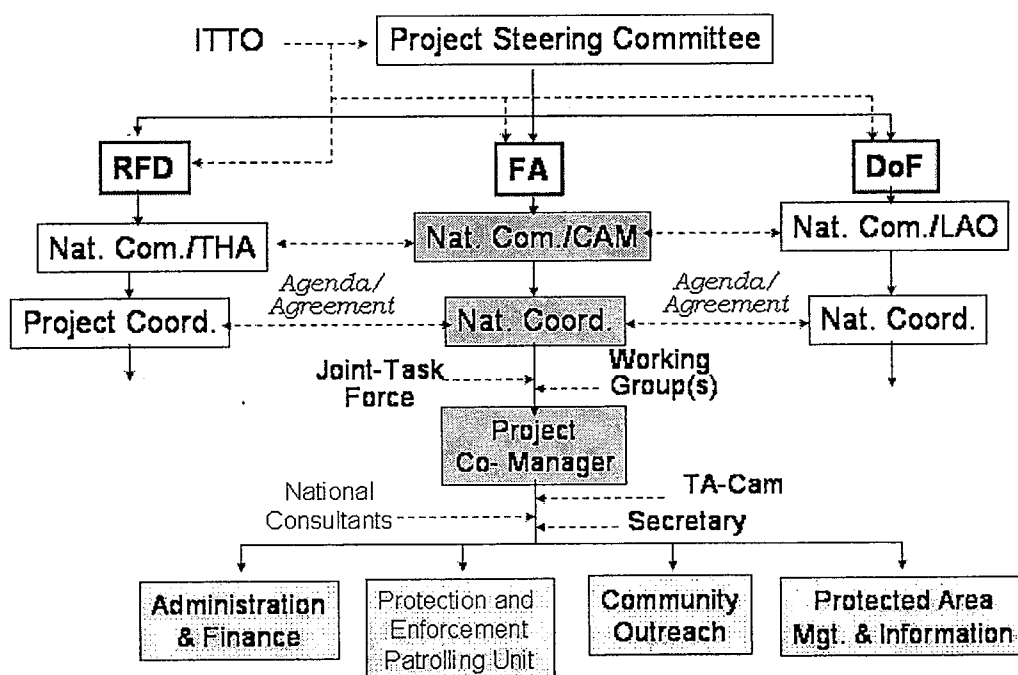
Organization Chart of Forestry Administration, Cambodia



ANNEX E PROPOSED ORGANIZATION CHARTS OF THAILAND AND CAMBODIA



Proposed Organization Chart of Thailand



Proposed Organization Chart of Cambodia

ANNEX F TERMS OF REFERENCE FOR THE KEY STAFF AND SUB-CONTRACTS

Thailand

Position	Man-months and Rate (US\$)
Project Manager	24 mm/ US\$ 2,500
Qualifications <ul style="list-style-type: none"> Thai citizen fluent in English (Laotian and Cambodian an advantage) University degree in forestry or natural resources (M.Sc. degree advantage) A minimum of 5 years working experience in natural resources management and proven to manage donor projects Knowledge of institutional analysis and proven leadership in team work 	Responsibilities <ul style="list-style-type: none"> Overall responsibility of project implementation Day-to-day administration Work closely with TA to ensure fruitful implementation Procurement of equipment Prepare progress report and work plan as required by the ITTO and RFD Present to the PSC Work with TA and RFD for selection of consultants Monitor progress of project activities
Technical Advisor	24 mm/ US\$ 2,000
<ul style="list-style-type: none"> International or Thai citizen fluent in English Advanced degree (M.Sc. or higher) in natural resources and environmental management A minimum 10 years working experience and proven to manage protected areas or biodiversity as well as policy and planning in a relevant area Written and oral communication skills in English Demonstrated good team working and coordinating with international, national and local stakeholders 	<ul style="list-style-type: none"> Coordinate project technical activities With the assistant of PM, he will strategies to strengthen coordinate Cambodia and Laos Organize workshop and training courses Work closely with TAs in Cambodia and Laos to harmonize management guidelines Work closely with consultants to conduct survey and studies Supervise joint-task force to formulate strategies Seek other funding supports nationally and internationally Prepare project proposal for Phase III or additional funding supports
Participatory community development and tourism Consultant	12 mm/US\$ 1,500
<ul style="list-style-type: none"> Thai citizen fluent in English Advanced degree (M.Sc. or higher) in participatory natural resources management (tourism an advantage) A minimum 5 years working experience in participatory protected area management and tourism Experience in report written and presentation Good understanding of socio-economic issues Proven ability to work with teams of local people and other specialists 	<ul style="list-style-type: none"> Survey data on community network Detail socio-economic survey in targeted communities Establish and strengthen community network, and other participatory mechanisms Develop criteria, regulation and monitoring system for ICDP and pilot activity fund Compile information on eco-tourism resources in the park Work with GIS consultants in Cambodia and Laos to survey potential tourist attractions along the tree countries Develop nature-based tourism package targeting local and overseas visitors Conduct eco-tourism management to PA staff and local people Recommend facilities and interpretation program for ecotourism development Prepare report
GIS Consultant	12 mm/US\$ 1,250
<ul style="list-style-type: none"> Thai citizen fluent in English 	<ul style="list-style-type: none"> Work with the project team and other

<ul style="list-style-type: none"> • Advanced degree (M.Sc. or higher) in GIS and natural resources management • A minimum 5 years working experience in GIS database development for biodiversity and protected areas • Experience in report writing, oral communication and presentation • Good understanding of spatial analysis and integration of biodiversity and socio-economic data into GIS database • Proven ability to work with teams and other specialists (experience with donor project an advantage) 	<ul style="list-style-type: none"> • consultants to develop additional GIS database as required • Continue updating the data • Work with GIS consultants in Cambodia and Laos to ensure that both countries develop GIS using standardized design • Propose mechanism and guideline for data sharing among the three countries • Conduct GIS/GPS training for PA staff • Assist on the site demarcation of selected communities • Prepare and implement public information systems on PPFC • Prepare report
Wildlife Specialist	6 mm/US\$ 1,000
<ul style="list-style-type: none"> • Thai citizen fluent in English • Advanced degree (M.Sc. or higher) in wildlife ecology • A minimum 5 years working experience in wildlife ecology and management (experience with donor project an advantage) • Experience in technical report and field manual writing, oral communication and presentation • Good understanding of wildlife monitoring techniques, especially large mammal species • Proven ability to work with teams and other specialists 	<ul style="list-style-type: none"> • Plan and conduct wildlife survey in Bun Thrik-Yot Mon proposed wildlife Sanctuary • Work with wildlife consultants in Cambodia and Laos to develop systematic survey and research on wide-range species • Supervise PA staff to conduct monitor wildlife and habitat uses • Train PA staff on wildlife monitoring • Prepare a manual for wildlife monitoring and reports
Ecologist (Entomologist)	6 mm/US\$ 1,000
<ul style="list-style-type: none"> • Thai citizen fluent in English • Advanced degree (M.Sc. or higher) in entomology or forest ecology • A minimum 5 years working experience in forest ecology and insects • Experience in technical report writing, oral communication and specimen collection • Good understanding of insect monitoring techniques and classification of especially edible and pollinators species • Proven ability to work with teams and other specialists 	<ul style="list-style-type: none"> • Survey and identify insect species in each forest types in the study area • Classify insect in terms of edible and pollinators • Prepare specimens and identify specimens collected • Train PA staff to identify plant species • Analyze the results and prepare reports
Botany Specialist	6 mm/US\$ 1,000
<ul style="list-style-type: none"> • Thai citizen fluent in English • Advanced degree (M.Sc. or higher) in plant taxonomy or forest ecology • A minimum 5 years working experience in taxonomy and forest ecology • Experience in technical report writing, oral communication and specimen collection • Good understanding of 	<ul style="list-style-type: none"> • Identify tree species in the study area • Recommend potential species for domestication (edible and medicinal species) • Maintain ecological sample plots • Prepare voucher specimens for herbarium and identify specimens collected • Train PA staff to identify plant species • Analyze the results and prepare reports

classification techniques and edible as well as medicinal plants <ul style="list-style-type: none"> • Proven ability to work with teams and other specialists and conducting training 	
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Cambodia

Position	Man-month and Rate (US\$)
Project Manager	24 mm/ US \$ 1,350
Qualifications & experience <ul style="list-style-type: none"> • Cambodian National fluent in English (Thai, Laotian or French an advantage); • A minimum of 5 years working experience in a relevant area, proven ability to manage donor projects and a good knowledge of global and national environment issues; • An advanced degree (Masters or higher) in natural resource management or areas relevant to environment and development; • Demonstrated strong leadership and coordination ability; • Good evaluation, analysis, report writing and presentation skills; • Knowledge of institutional and individual capability building issues and good experience in broad-based stakeholder consultation; • Team player able to work under pressure and with little supervision 	Responsibilities <ul style="list-style-type: none"> • Overall responsibility for project implementation • Coordinate with other concerned stakeholders in order to ensure all project activities are implemented efficiently and as planned • Serve as focal point for FA, PSC and NPCC; interact with Government institutions and relevant stakeholders (donor, academic institution & private sector) • Procurement of equipment • Supervise the preparation of progress reports, financial reports and work plans as required by the ITTO, PSC and FA • Present project work plan progress to FA, PSC and NPCC • Work closely with TA, GIS specialist, FA, local support staff and CALM Project Management Team to finalize and prepare the Preah Vihear Protected Forest Management Plan. • Day-to-day Project administration and Management
Technical Advisor	24 mm/US \$ 1,200
Qualifications & Experience <ul style="list-style-type: none"> • University Degree in natural resource management or area relevant to global environment issues and land use planning • A minimum of 15 years working experience in a relevant area, proven ability to manage donor projects and a good knowledge of global and national environment issues; • Good understanding of policy and planning related to natural resource management • Written and oral communication skills including the capacity to relate to both the internal and external constituencies of the project • Demonstrated good team working spirit and coordinating with relevant stakeholders • Excellent English and computer 	Responsibilities <ul style="list-style-type: none"> • Coordinate project technical activities • Work closely with the PM, GIS specialist and CALM Management Team; he/she will provide strategies to strengthen the coordination with Project Teams of Thailand and Laos • Help organize workshops, meetings, training courses and study tours • Work closely with TAs in Thailand and Laos to harmonize management guidelines • Work closely with CALM Project Management Team to finalize and prepare the Preah Vihear Protected Forest Management Plan. • Advise on the joint-task force to formulate strategies and Management Plan • Seek other funding support nationally and internationally • Support the tri-national project team in the preparation of the project proposal for Cambodia Phase II/Transboundary project phase III

literate <ul style="list-style-type: none"> • Experience in technical reporting writing and presentation 	
GIS Consultant	170 days/US \$ 120 per day
Qualifications <ul style="list-style-type: none"> • An advanced degree (Masters or higher) in GIS or in areas relevant to environmental sciences and development; • A minimum of 5 years of working experience in GIS, database management and in the area relevant to the project • Written and oral communication skills including the capacity to relate to both the internal and external constituencies of the project • Good evaluation, analysis, report writing and presentation skills • Good knowledge of GIS, databank development and environment issues in general • Good English and computer literate • Proven ability to work with teams of people and work under pressure and ability to work autonomously and as a member of a team 	Responsibilities <ul style="list-style-type: none"> • Work with the project team and other specialist to improve GIS database management as required and compile Preah Vihear Protected Forest GIS databank • Provide training on GIS application for Biodiversity Conservation, GIS mapping, GIS databank management and spatial analysis to Protected Forest Staff • Work with GIS consultants in Thailand and Laos to ensure that all three countries (for project site) to design a standardized GIS databank • Propose mechanism and guidelines for data sharing among the three countries • Assist on the site demarcation of selected communities and ground demarcation for Protected Forest boundary. • Prepare thematic maps on the Emerald triangle Protected Forest Complex • Work closely with PM, TA, local support staffs, CALM Management Team to finalize and prepare the Preah Vihear Protected Forest Management Plan.

ANNEX G SUMMARY RESPONSE TO THE RECOMMENDATIONS OF THE 28TH EXPERT PANEL

No.	Recommendations of the 28 th Expert panel of ITTO	Modifications	Page #
1	1. Present a summary of achievements of Phase I and demonstrate clearly the proposed phase is built on these achievements;	Achievement Table and proposed objectives in Phase II inserted.	4
2	2. Improve the problem analysis and the problem tree taking into account the achievements of Phase I and develop a sound logical framework matrix with due attention with measurable indicators and means of verification;	Problem tree revised and logical matrix expanded	12-14; 26
3	3. Consider seeking additional partners (universities, other funding organizations, etc.) to fund a cost share research portion of the project;	Thailand proposes Kasetsart and Ubon Ratchathani Universities as research partnership; Cambodia has no research proposals.	16
4	4. Provide specific details on the ICDP and nature-based activities to be carried out in each country;	Thailand elaborates ICDP and Cambodia provides more explanation on CLDP.	13-14
5	5. Justify the relevance of study tour to Malaysia to the project, or take it out of the project;	Cambodia eliminated the proposed study tour to Malaysia	-
6	6. Define more explicitly now that future financial of the project will be ensured, with the aim to reduce its dependency on donor funding;	Thailand will integrate the project into national program after 2005 and Cambodia significantly expands the Project Sustainability Section.	17-19
7	7. Revise the budget in the following manner: <ul style="list-style-type: none"> Scale down the ITTO budget by reducing the costs of activities relating to publication, duty travel, research and meetings; 	Grand Total Budget requested from ITTO is reduced from US\$ 873,699 to US\$ 688,208. Thailand and Cambodia significantly reduce the cost of activities and sub-contracts.	1 31,34
	<ul style="list-style-type: none"> Eliminate all ITTO funds allocated for Laos component, which should be borne by the Government of Laos, since it is not ITTO member; 	All ITTO fund to Laos is totally eliminated from budget table.	-
	<ul style="list-style-type: none"> Justify budget item 31.3; 	Budget item 31.3 for both countries significantly reduced and justified.	31,34
	<ul style="list-style-type: none"> Include US\$12,000 for ITTO monitoring and review costs and US\$ 15,000 for the ex-post evaluation costs; Recalculate ITTO's programme support costs (budget item 83) at 8% of total ITTO project costs as decided by the 35th ITTC; 	This has been done consistent with ITTO recommendation. <ul style="list-style-type: none"> Cost of ITTO monitoring is split between Thailand and Cambodia. Recalculated budget item 83 to US\$ 26,139 (THA) and US\$ 24,839 (CAM). Summary ITTO monitoring (see Section 7.3) 	31,34 36
	<ul style="list-style-type: none"> Include contributions of the Government of Laos. 	Laos is not a formal participating country in Phase II and therefore will contribute no fund.	-
8	8. Provide detailed terms of reference for the sub-contracts; and	Thailand and Cambodia provided qualifications and responsibilities for all sub-contracts. Cambodia eliminated a number of sub-contracts.	66
9	9. Include an annex that shows the recommendations of the 28 th Expert panel and the respective modifications in tabular form.	This annex (G) responds to the recommendations of ITTO.	70