

GEF

## Global Environment Facility

**MOHAMED T. EL-ASHRY**  
CHIEF EXECUTIVE OFFICER  
AND CHAIRMAN

September 28, 2000

Dear Council Member:

I am writing to notify you that UNDP, the Implementing Agency for the project entitled, *Malaysia: Conservation and Sustainable Use of Tropical Peat Swamp Forests and Associated Wetlands Ecosystems*, has submitted the proposed project document for CEO endorsement prior to final approval of the project in accordance with UNDP procedures.

Over the next four weeks, the Secretariat will be reviewing the project document to ascertain that it is consistent with the proposal included in the work program approved by the Council in May 1999, and with GEF policies and procedures. The Secretariat will also ascertain whether the proposed level of GEF financing is appropriate in light of the project's objectives.

If by October 26, 2000, I have not received requests from at least four Council Members to have the proposed project reviewed at a Council meeting because in the Member's view the project is not consistent with the Instrument or GEF policies and procedures, I will complete the Secretariat's assessment with a view to endorsing the proposed project document.

We have today posted the proposed project document on the GEF website at [www.gefweb.org](http://www.gefweb.org). If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Mohamed T. El-Ashry  
Chief Executive Officer and  
Chairman

Cc: Alternates, Implementing Agencies, STAP



United Nations Development Programme  
GLOBAL ENVIRONMENT FACILITY (GEF)



30 June 2000

*Mohamed/*  
Dear Mr. El-Ashry,

Subject: MAL/99/G31/A/1G/99 – Conservation and Sustainable  
Use of Tropical Peat Swamp Forests Associated  
Wetland Ecosystems

I am pleased to enclose the regional proposal for Malaysia entitled **"Conservation and Sustainable Use of Tropical Peat Swamp Forests Associated Wetland Ecosystems"** which was approved by the GEF Executive Council in May 1999. The response to comments from Council Members is also attached and these comments have been addressed in the project document.

As per paragraph 29 and 30 of the GEF Project Cycle, we are submitting this project to you for circulation to the Executive Council Members for comments and, subsequently, for your final endorsement.

Thank you in advance for expediting the review and approval of this project.

Yours sincerely,

Rafael Aserjo  
Executive Coordinator  
Global Environment Facility, SEED/BDP

Mr. Mohamed El-Ashry  
Chief Executive Officer  
Global Environment Facility  
Room G6005  
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PM

**UNITED NATIONS DEVELOPMENT PROGRAMME  
GLOBAL ENVIRONMENT FACILITY**

**PROJECT OF THE GOVERNMENT OF MALAYSIA**

**PROJECT DOCUMENT**

Project No. & Title	<b>MAL /99/G31: Conservation And Sustainable Use Of Tropical Peat Swamp Forests and Associated Wetland Ecosystems</b>
Duration:	5 years
Project sites:	Malaysia: Loagan Bunut National Park, Sarawak; Klias Peninsula, Sabah; South-East Pahang Peat Swamp Forest, Pahang
ACC/UNDP Sector:	20 Environment
and Sub-sector:	30 Environment Enhancement & Mgt
Government Sector and Sub-sector	Environment Biodiversity
Executing Agency:	Ministry of Primary Industries,
Implementing Agency:	Regional Centre for Forest Management
Estimated Starting Date:	July 2000

**UNDP and Cofinancing**

UNDP/GEF	\$5,985,000
Government	\$5,280,000
DANCED	\$1,600,000
Netherlands	\$800,000
<b>TOTAL</b>	<b>\$13,665,000</b>

**Brief Description:**

The primary objective of this project is to develop and implement plans and to encourage processes that will ensure the conservation and sustainable use of globally significant genetic, species and ecosystem diversity within tropical peat swamp forests in Malaysia. This will contribute to implementation of the Malaysian Biodiversity Action Plan by providing demonstrations of conservation and sustainable management of peat swamp forests. The project will ensure conservation and sustainable use at three sites, as well as demonstrating what is required for the adoption of a multi-sectoral approach to peat swamp forest management throughout Malaysia. It will support implementation of the Convention on Biological Diversity and the Ramsar Convention.

On behalf of	Signature	Date	Name/Title
The Government	_____	_____	_____
The Executing Agency	_____	_____	_____
UNDP	_____	_____	_____

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Output 1: Data collection and setting up of a monitoring programme and information management system to facilitate management and decision-making

Output 2: Well-formulated site management plans, addressing issues such as biodiversity, physical functions and sustainable use

Objective 2: To demonstrate the implementation of biodiversity conservation and sustainable resource utilization strategies in peat swamp forests

Output 3: Conservation and sustainable use of peat swamp forest ecosystem resources and functions demonstrated

Output 4: Inter-agency networks at State level to integrate biodiversity overlays into development planning on peatlands

Objective 3: To strengthen institutional and human technical capacities and awareness

- Output 5: Decision-makers, communities and other stakeholders better aware of the importance of conserving peat swamp forests and associated wetland ecosystems
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## LIST OF ABBREVIATIONS

APR	Annual Project/Programme Report		Malaysia
CTA	Chief Technical Advisor	NCR	Native Customary Rights
CWM	Community Wildlife Management	NGO	Non-governmental Organisation
DANCED	Danish Cooperation for Environment and Development	NP	National Park
DARA	South-East Pahang Development Authority	NPD	National Project Director
DID	Drainage and Irrigation Department	NPWO	National Parks and Wildlife Office (Sarawak)
DOE	Department of Environment	NREB	Natural Resources and Environment Board (Sarawak)
EIA	Environmental Impact Assessment	NSC	National Steering Committee
EPU	Economic Planning Unit (Prime Minister's Department Malaysia)	NTFP	Non-Timber Forest Products
FD	Forestry Department	PA	Protected Area
FR	Forest Reserve	PELITA (LCDA)	Sarawak Land Custody and Development Authority
FRIM	Forest Research Institute of Malaysia	PFE	Permanent Forest Estate
GEF	Global Environment Facility	PRA	Participatory Rural Appraisals
GIS	Geographic Information System	PSF	Peat Swamp Forest
GoM	Government of Malaysia	PSU	Project Support Unit
INTAN	<i>Institut Tadbiran Awam Negara</i> (National Institute of Public Administration)	RBAP	Regional Bureau Asia-Pacific (UNDP)
IPPA	Identification of Potential Protected Areas programme (Sarawak)	RIL	Reduced Impact Logging
JHEOA	<i>Jabatan Hal-Ehwal Orang Asli</i> (Orang Asli Affairs Department)	RPS	<i>Rancangan Penempatan Semula</i> (Government Resettlement Scheme)
LBNP	Loagan Bunut National Park (Sarawak)	SBC	Sarawak Biodiversity Centre
M&E	Monitoring and Evaluation	SEPPSF	South-East Pahang PSF
MOCAT	Ministry of Culture, Arts and Tourism (Federal)	SPU	State Planning Unit
MOCET	Ministry of Culture, Environment and Tourism (Sabah)	TOR	Terms of Reference
MPI	Ministry of Primary Industries	TPR	Tri-Partite Review
MTC	Malaysian Timber Council	UNDP	United Nations Development Programme
MTDEST	Ministry of Tourism Development, Environment, Science and Technology (Sabah)	VJR	Virgin Jungle Reserve
NAHRIM	National Hydraulic Research Institute of	WCMC	World Conservation Monitoring Centre
		WMC	Wetlands Management Committee
		WWF	Worldwide Fund for Nature

## SECTION A: CONTEXT

### A.1 ENVIRONMENTAL CONTEXT

Tropical peat swamp forest (PSF) is a unique and diverse ecosystem with a variety and abundance of often highly adapted fauna and flora. It is a “dual ecosystem” of tropical rain forest and tropical peatland found only within specific areas of the humid tropics characterised by low-lying flat land with limited seasonality and poor drainage.<sup>1</sup> Many peat swamp forest plants are endemic and much of its characteristic fauna is severely threatened. Besides its critical role in providing habitat for wildlife, tropical PSF also acts as a gene bank, harbouring potentially useful varieties of plant species.<sup>2</sup>

The global centre of tropical PSF distribution lies in the Indo-Malayan realm; in Malaysia, Indonesia, Vietnam, Thailand and the Philippines. In most of these countries, PSF areas have been reduced to a small fraction of their former extent; most remaining forests are found in Malaysia and Indonesia.

PSF is the most important of Malaysia’s wetland types in terms of biodiversity, area and biogeography, accounting for approximately seventy-five percent of total wetland area. Malaysia possesses about 1.45 million ha of PSF, more than eighty percent of which is located in the East Malaysian state of Sarawak. Sarawak’s estimated 1.24 million ha of PSF cover thirteen percent of the state’s total land area. In the other East Malaysian state of Sabah, remaining PSF areas are relatively small, though biologically significant. Some 200,000ha of PSF remains in Peninsular Malaysia, the majority of which is found in a single, nearly contiguous area in the state of Pahang. Smaller areas of PSF are situated in the states of Selangor, Perak and Johor.

Malaysia’s PSF areas safeguard enormous biological diversity while providing crucial benefits and services for the sustainable development of human communities. They are highly significant globally, both for their diverse and threatened species and as representative unique ecosystems. Viable populations of many globally threatened species, such as Orang Utan, Proboscis Monkey, Sumatran Rhinoceros, Storm’s Stork, Wrinkled Hornbill, Tomistoma, and the *dipterocarp* tree Alan, are found in Malaysia’s PSFs. Many unknown species (of blackwater fish, for instance), almost certainly remain to be discovered. Unique and endangered peat swamp forest types, such as Malaysia’s formerly extensive east coast PSF formations and the Alan forests endemic to western Borneo, are also present. Unfortunately, quantitative and qualitative losses of Malaysia’s PSF habitat have led to important global biodiversity losses, while increasing the urgency and importance of effective conservation of remaining representative PSF areas and their biodiversity.

In 1996 the Ministry of Science, Technology and the Environment obtained a PDF-B grant from GEF to identify a number of representative PSF areas and to develop a project for the conservation and sustainable use of these areas as key demonstration sites. Site selection was undertaken through an extensive series of consultations with the governments of all key States in Malaysia, as well as consultations with relevant Federal Government Ministries and agencies and other stakeholders. Key selection criteria were developed and endorsed during the Project Inception Workshop in July 1997, and are detailed in the Proceedings of the

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<sup>1</sup> Rieley and Page 1997.

<sup>2</sup> Silvius and Giesen 1992. The authors also describe important non-biological values of tropical PSF. Hydrologically, it acts as a giant sponge, providing vital services as an aquifer for groundwater recharge and water supply, in flood and flow regulation and in prevention of saline water intrusion. Tropical PSF also plays a significant role as a global carbon sink. On a per hectare basis, tropical peatlands hold the largest amount of carbon in the world, while sequestering substantial additional amounts annually. Ensuring the conservation and sustainable use of PSF can therefore help to secure important and continuing global benefits related to climate change, as well as benefits related to biological diversity.

Workshop.<sup>3</sup> These criteria were based firstly on the conservation importance of the sites under the Convention on Biological Diversity (CBD), and secondly on principles of conservation biology and practical feasibility, including:

- Size
- Degree of threat
- Level of vulnerability
- Priority status at national and regional level
- Potential to integrate conservation and sustainable development activities
- Cost-effectiveness of a project intervention
- Feasibility of developing mechanisms for long-term sustainability
- Potential of site for training, education and public awareness
- Research and demonstration potential
- Linkages with other protected areas (national and international)

The sites chosen for the project were Loagan Bunut National Park (LBNP) in Sarawak, the Klias Peninsula in Sabah and the South-East Pahang Peat Swamp Forest (SEPPSF) in Pahang. The three sites are significant representative examples of Malaysian PSF. Each represents a particular type of PSF ecology, and each is also managed and utilised under quite different legal and administrative structures. Taken together the three sites represent a good cross-section of the ecological, legal, administrative and socio-economic conditions found in PSFs in Malaysia. Therefore, lessons learned from the project's activities in these three areas will be widely applicable to other PSF areas, both within Malaysia and in the broader region.

For the purposes of the project, each site is divided into two zones:

- (i) “core zones” are defined as those areas where key PSF biodiversity is primarily located, and where threats will be sustainably removed through project activities;
- (ii) “buffer zones” will include locations contiguous to and generally surrounding the core zones, within which significant PSF biodiversity—as well as biodiversity of ‘associated wetland ecosystems’—is found, and where negative impacts of threats operating at a larger scale will be mitigated so as to buffer the core zones from these threats.

#### **A.1.1 Loagan Bunut National Park, Sarawak**

Loagan Bunut National Park (LBNP), which was gazetted in 1990, covers a 10,736ha area between the Sg. Tinjar and Sg. Teru rivers, in the upper reaches of the Baram River basin in Sarawak. LBNP protects a complex mosaic of wetland habitats; in addition to four of six phasic communities unique to Bornean PSFs, the Park supports the only freshwater floodplain lake (800ha) in Sarawak, an ox-bow lake, freshwater swamp forest, dryland forest, rivers and riverine forests. The PSF area amounts to about 7,000ha which, together with an associated large lake (Loagan Bunut), constitute the “core zone” for the site. The broader “buffer zone” includes the remainder of the park, i.e., the forest and wetland ecosystems noted above.

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<sup>3</sup> Phang Tze Jan and Mohd. Khairul Effendi (eds) (1997); *Proceedings of the GEF Inception Workshop on Conservation and Sustainable Use of Peat Swamp Forests in Malaysia*, Ministry of Science, Technology and the Environment, pp. 16-18.



LBNP supports resident populations of at least six mammal species, twelve bird species, four reptile species and six tree species which are categorised as globally threatened by the World Conservation and Monitoring Centre (WCMC). These include the endemic Grey Leaf Monkey *Presbytis hosei*, Flat-headed Cat *Felis planiceps*, Wrinkled Hornbill *Aceros corrugatus*, Storm's Stork *Ciconia stormi* and a potentially viable Tomistoma *Tomistoma schlegelii* population. It is the only site in Sarawak supporting breeding colonies of waterbirds, including Storm's Stork, Oriental Darter *Anhinga melanogaster*, Little Cormorant *Phalacrocorax sulcirostris* and Great Egret *Egretta alba*. The focal PSF area is an important example of the 'Alan forests' endemic to western Borneo. It supports stands of *Gonystylus bancanus* (Ramin) and is the only protected area containing the endangered Bornean endemic PSF dipterocarp, Alan *Shorea albida*.

#### **A.1.2 Klias Peninsula, Sabah**

The Klias Peninsula consists of a 135,000ha complex of PSF, rivers, freshwater swamp forest, brackish ecosystems of nipa and palm/fig forests, mangroves, ox-bow lakes, open grassland marshes, kerangas and dry-land secondary forests. The project's "core zone" consists of some 3,600ha of mixed PSF found in the Klias Forest Reserve (FR) and about 2,500ha of associated transitional wetland ecosystems, including *Gymnostoma* swamp forest, mangrove and riverine forest, part of which lies within the Kampung Hindian FR. The broader "buffer zone" consists of the land-use mosaic within the remainder of the Sg. Padas river system, representing approximately one-third of the peninsula. Several project activities, e.g., those related to planning, will benefit other areas in the Peninsula, such as the Binsuluk FR, where a substantial area of PSF is located but which suffered heavy damage due to fire in 1998.

Klias FR and the surrounding area support an even expanse of PSF phasic communities, characterised by the dominant association of several species, namely Kapur Paya *Dryobalanops rappa*, Seraya Paya *Shorea platycarpa*, Jongkong *Dactylocladus stenostachys* and Ramin *Gonystylus bancanus*. Together these species make up sixty- to seventy percent of the standing basal area. Other common species include Bintangor *Calophyllum havilandii*, Nyatoh Ketiau *Madhuca motleyana* and Katok *Stemonurus scorpioides*. Within the core zone, the majority of pure PSF is found in Klias FR, while part of Kampung Hindian FR also comprises mixed PSF. The deep peat soils found within and around Klias FR, known as "Klias series", are unique to this area.

### A.1.3 South-east Pahang PSF, Pahang

Southeast Pahang PSF (SEPPSF) is by far the largest intact virgin peat swamp forest area (c. 160,000ha) in mainland tropical Asia. Over half of the area, or about 90,000ha, is located within four production forest reserves—Pekan, Nenasi, Resak and Kedondong—which form part of Malaysia’s Permanent Forest Estate (PFE). There will be two “core zones” at SEPPSF, namely the core areas of the Pekan and Nenasi FRs. As the largest and possibly least threatened of the FRs, the core area of Pekan offers the most suitable location for strict conservation measures that, through a GEF intervention, will guarantee conservation of globally significant PSF biodiversity. The smaller Nenasi FR, which is buffered to the north and south by other FRs, has similarly strong conservation potential. The “buffer zone” will include all four FRs and adjacent land along the Rivers Bebar and Merchong.

The core zones will be divided between three management approaches, consisting of core conservation areas, sustainably-managed forest areas and baseline sustainably-managed areas. Core conservation areas are those sections of the core zone that will be totally preserved to maintain biodiversity, while sustainably-managed forest areas are those zones in which the sustainable forest management practices to be developed under the project will be deployed. The baseline sustainably-managed areas will consist of areas of PSF that have already been earmarked for sustainable logging under existing best practices, and will total less than 4,000 ha of PSF forest.

Within these unlogged PFE reserves lies the bulk of Peninsular Malaysia's globally significant PSF area and biodiversity. SEPPSF is among the oldest peat swamp forests in Peninsular Malaysia and consequently exhibits highly developed and significant PSF ecosystems. An example of the East Coast peat swamp formations, it represents the only remaining association in Peninsular Malaysia of the “Riau pocket” vegetation. The mixed swamp forest of the eastern side, the deep peat in the centre, interspersed by small dryland hills and slow-flowing rivers meandering around sandy beach ridges together provide a rich variety of floristic communities, which in turn support unique animal communities. Fifteen mammal, nine bird, three reptile and two tree species categorised by WCMC as globally threatened are known to occur in SEPPSF. Species such as the Painted Terrapin, which is critically endangered, and the Malayan Tiger, Asian Elephant and Sunda Otter Civet, all of which are endangered, occur in SEPPSF. The Hairy-nosed Otter is known from only three records in the past three decades, all in close vicinity to SEPPSF. The tree species Ramin *Gonystylus bancanus* is classified as vulnerable (VU) by WCMC. *Durio carinatus* is endemic to the East Coast of Peninsular Malaysia and is being severely reduced by commercial exploitation. Finally, unknown species are likely to be discovered; recent work on PSF blackwater fish at SEPPSF has led to the discovery of a number of species new to science.

## A.2 SOCIO-ECONOMIC CONTEXT

No human populations exist within the core zones of the three project sites, however limited human populations are found within the broader buffer zones. In LBNP, small temporary settlements of native Berawan fishermen (who have Native Customary Rights to fish in the area) are found around the southern shores of the lake (Loagan Bunut) and along Sungai Loagan Bunut. Two settlements of Iban tribal migrants are also located on the fringe of the Park within the buffer zone, although these small settlements do not infringe upon

the Project's core protection areas.<sup>4</sup> In Klias Peninsula small villages, averaging approximately 200 persons each, are found along the larger rivers and streams in the buffer zone. In Pahang, a few scattered Orang Asli settlements are also found along the Bebar and Merchong Rivers, although these communities are progressively resettling to larger Orang Asli villages outside the buffer zone.<sup>5</sup>

Local communities in the vicinity of all three buffer zones interact with the PSFs to varying degrees. The indigenous communities in Malaysia's PSF areas are generally highly localised and have evolved specific life-style and resource use patterns adapted to living in proximity to PSFs. For instance, the Jakun tribe in the SEPPSF area harvests reeds and swamp grasses such as Pandan<sup>6</sup>, Mengkuang<sup>7</sup> and Nipah<sup>8</sup> for a variety of uses including thatching, matting, basketry and traditional clothing. In Klias, fish and prawns from the PSF and associated wetland areas form an important part of local diets and incomes, while limited amounts of timber are harvested mainly for building small boats or *sampan*.

PSF resource use patterns exhibited by indigenous communities in the buffer zones, such as the Jakun in SEPPSF and the Berawan fishermen in LBNP, are generally sustainable. However, socio-economic transformations occurring during the opening-up of PSF areas, e.g. resettlement and the introduction of new technology, have altered some resource use patterns in unsustainable ways. For example, the introduction of out-board motors and other modern fishing technologies has increased the per capita catch of Berawan fishermen at Loagan Bunut, possibly beyond sustainable levels.<sup>9</sup> Likewise, the resettlement of tribal Jakun people into Government Resettlement Schemes (RPS) has concentrated formerly scattered populations and their resource use zones into relatively small areas on the outskirts of SEPPSF, thus sharply reducing the size of accessible PSF areas. One objective of the project is to engage with these stakeholders to ensure awareness of conservation values and sustainability.

Over the last three or four decades, areas surrounding all three project sites have experienced significant immigration, generally after being 'opened-up' for logging or agriculture. These settler communities exhibit less marked adaptations to tropical PSF habitats, and confine their interactions to harvesting common resources such as timber, non-timber forest products (NTFPs), fish and other food items. Settlement activity is characterised by conversion of PSF areas to conventional land uses, e.g. for large-scale agriculture, rather than by adaptation of settler lifestyles to the existing PSF environment. In areas bordering LBNP, for example, Iban settlers concentrate on clearing land for padi, rubber and other forms of cultivation rather than on exploiting

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<sup>4</sup> In response to concerns raised regarding the possible relocation of these communities, the Sarawak State Government has, during a meeting with UNDP on 24 September 1999, issued the following response (as minuted in Sarawak State Planning Unit letter (36) UPN/S/903/16):

*"There has been no relocation of the Iban settlers inside Loagan Bunut National Park area ever since the gazettment of Loagan Bunut as the National Park in 1990. The Government of Sarawak has no intention of making use of the project as an avenue to carry out relocation exercise of settlers from the National Park area."*

<sup>5</sup> This voluntary resettlement programme, administered by the Orang Asli Affairs Department (JHEOA), is part of the longer-term social development strategy for Orang Asli communities in Malaysia and is not related to the Project or its activities in any way. All relocations are voluntary and are merely facilitated (not imposed) by JHEOA. These relocations are intended to facilitate the provision of infrastructural facilities (roads, electricity, water) and to improve access to educational and employment opportunities by clustering families in larger, more accessible communities where such facilities can be provided at a feasible cost. Whilst such relocations are encouraged, all such moves are voluntary, and indeed a small number of Orang Asli interviewed during the stakeholder consultation exercises have indicated that they had turned down such relocation offers and prefer to remain where they are.

<sup>6</sup> *Pandanus fascicularis*

<sup>7</sup> *Ladang Pandanus* sp.

<sup>8</sup> *Nypa fruticans*

<sup>9</sup> Preliminary ecological analysis conducted during project design and preparation indicated the possibility that harvesting levels were unsustainable, and feedback from the local community during stakeholder consultations indicated declining fish yields. See Annex 4, Section 2.2.3 (Key Issues).

existing PSF resources. Similarly in Klias large areas of land (outside the buffer zone) were logged and subsequently developed for rubber and oil palm.

Larger population concentrations are found in areas surrounding the project sites, information about whom is provided in Annex 4, along with details of the indigenous and settler inhabitants. These local communities are key stakeholders in the project, and details of present and continuing stakeholder participation arrangements are provided in Annex 4 also.

The primary economic activities in Malaysian PSF areas are monocultural agriculture and logging. Economic growth is largely generated by commercial-scale development activity rather than locally-generated investment. Thus the involvement of local communities is limited to providing unskilled labour to plantations and other commercial operations owned by outsiders, rather than being owners or managers of indigenous economic enterprises. One key consequence of economic development, particularly in SEPPSF and Klias Peninsula, has been a gradual reduction in indigenous communities' interaction with the PSF areas, as employment opportunities in agriculture and other industries have superseded PSF resources as livelihood sources.

### **A.3 HOST COUNTRY STRATEGY**

At present, biological conservation measures in Malaysia do not fall under any one specific piece of legislation. Instead conservation policies are largely sector-based, coming under legislation related to environmental quality, land use and ownership, water, wildlife, forests and sustainable forestry to name a few. Such legislation is both national (under the Federal Government) and state-specific, particularly in the case of Sabah and Sarawak. A partial list of legislation with biological conservation aspects illustrates the complexity of the current structure:

#### National Legislation

- Drainage Act 1951
- Irrigation Act 1952
- Environmental Quality Act 1974
- Plant Quarantine Act 1976
- Fisheries Act 1985
- Tourism Industry Act 1992

#### Peninsular Malaysia (legislation which does not encompass Sabah and Sarawak)

- Waters Act 1920
- Aboriginal Peoples Act 1954 (Revised 1974)
- Land Conservation Ordinance 1960
- National Land Code 1965
- Protection of Wildlife Act 1972 (Amended 1976)
- National Parks Act 1980 (Amended 1983)
- National Forestry Act 1984 (Amended 1993)

#### Sarawak

- Natural Resources Ordinance 1949 and  
Natural Resources and Environment (Amendment) Ordinance 1993
- Forests Ordinance 1954
- National Parks Ordinance 1956

- Wildlife Protection Ordinance 1958 and Amendment 1998
- Tourism Board Ordinance 1994
- Water Ordinance 1994
- Sarawak Biodiversity Ordinance 1998

#### Sabah

- Land Ordinance 1930
- Fauna Conservation Ordinance 1963
- Forest Enactment 1968
- Tourism Promotion Corporation Enactment 1981
- Forests (Amendment) Enactment 1984
- Parks Enactment 1984
- Fisheries Act 1985
- Environmental Conservation Enactment, 1996
- Wildlife Conservation Enactment, 1997
- Cultural Heritage (Conservation) Enactment 1997
- Water Resources Enactment, 1998

### **A.3.1 National Policies**

Two key national policies which set the framework for biological conservation in PSF areas are the National Policy on Biological Diversity (1998) and the National Forestry Policy (1978, revised 1992).

Malaysia adopted a **National Policy on Biological Diversity**,<sup>10</sup> in 1998, in an attempt to streamline and rationalise biological conservation practices. This policy is encapsulated in a policy statement; “to conserve Malaysia’s biological diversity and to ensure that its components are utilised in a sustainable manner for the continued progress and socio-economic development of the nation.”<sup>11</sup>

The Policy proclaims a set of eleven principles on which conservation and sustainable use of the nation’s biological diversity will be based. Drawing on these principles, it sets out a series of six long-term objectives for biodiversity conservation in Malaysia:<sup>12</sup>

- (i) To optimise economic benefits from sustainable utilisation of the components of biological diversity;
- (ii) To ensure long-term food security for the nation;
- (iii) To maintain and improve environmental stability for proper functioning of ecological systems;
- (iv) To ensure preservation of the unique biological heritage of the nation for the benefit of present and future generations;
- (v) To enhance scientific and technological knowledge, and educational, social, cultural and aesthetic values of biological diversity;
- (vi) To emphasise biosafety considerations in the development and application of biotechnology;

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<sup>10</sup> Ministry of Science, Technology and Environment, 1998.

<sup>11</sup> Ibid., p. 2.

<sup>12</sup> Ibid., p. 4.

The Policy also outlines fifteen specific strategies and associated action plans for conserving biodiversity in Malaysia.<sup>13</sup> A number of these strategies are directly relevant to the management and conservation of peat swamp forests and will be highlighted as themes for the project sites. These include:

- Strategy II: Enhance Sustainable Utilisation Of The Components Of Biological Diversity
- Strategy VI: Integrate Biological Diversity Considerations Into Sectoral Planning Strategies
- Strategy VII: Enhance Skill, Capabilities And Competence
- Strategy X: Minimise Impacts Of Human Activities On Biological Diversity
- Strategy XII: Enhance Institutional And Public Awareness

The **National Forestry Policy**<sup>14</sup> was first adopted by the National Land Council and implemented by all Peninsular Malaysian states in 1978. It was based upon the Interim Forest Policy formulated in 1952, and was subsequently revised in 1992. The 1992 Revision placed greater emphasis on sustainable forest management requirements and conservation of forest areas, through the promotion of forest plantations, utilisation of non-wood forest products, community forestry, conservation of biological diversity, promotion of scientific research and enhanced international cooperation in forest management.<sup>15</sup> The National Land Council<sup>16</sup> approved the Revised policy on 19 November 1992.

The National Forestry Policy is built upon two key **objectives**;<sup>17</sup>

- To conserve and manage the nation's forest based on the principles of sustainable management
- To protect the environment as well as to conserve biological diversity, genetic resources, and to enhance research and education.

In line with these objectives seventeen **Policy Statements** were formulated, laying-out the key principles upon which the management of Malaysia's forest resources would be based. Amongst the Statements relevant to the Project are:

- 2.2.2 To manage the Permanent Forest Estate in order to maximize social, economic and environmental benefits for the nation and its people in accordance with the principles of sustainable management.
- 2.2.4 To promote efficient harvesting and utilization within the production forest for maximum economic benefits from all forms of forest produce and to stimulate the development of appropriate forest industries commensurate with the resource flow and to create employment opportunities.
- 2.2.10 To undertake and support a comprehensive programme of forestry training at all levels in the public and private sectors in order to ensure adequate supply of trained manpower to meet the requirements of forestry and wood-based industries.
- 2.2.12 To undertake and support intensive research programmes in forestry and forest products aimed at enhancing maximum benefits from the forest.
- 2.2.13 To promote education in forestry and undertake publicity and extension services in order to generate better understanding among the community on the multiple values of forests.
- 2.2.14 To provide for the preservation of biological diversity and the conservation of areas with unique species of flora and fauna.

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<sup>13</sup> Ibid., pp. 24-38.

<sup>14</sup> Forestry Department Peninsular Malaysia, 1995

<sup>15</sup> Ibid, p. v.

<sup>16</sup> Comprising all Peninsular Malaysian States and the Federal Government

<sup>17</sup> Ibid, p. 5.

- 2.2.15 To develop a comprehensive programme in community forestry to cater for the needs of the rural and urban communities.
- 2.2.16 To set aside specific areas for the purpose of forestry education and other scientific studies.
- 2.2.17 To foster closer international co-operation in forestry in order to benefit from the transfer of technology and exchange of scientific information.

These two National Policies directly support the key objectives and outputs of the project, and serve to underscore Malaysia's high-level commitment to the project's approach and goals.

#### **A.4 INSTITUTIONAL FRAMEWORK OF THE SUB-SECTOR**

Malaysia is a federation of thirteen states and two federal territories. Its constitution provides substantial authority to state governments, particularly the East Malaysian States of Sabah and Sarawak. In the area of environment and natural resources, much authority lies at state level; state governments are responsible for the protection, management and utilisation of natural resources such as land, water, agriculture and forestry. For its part, the federal government has primary responsibility for environmental protection and pollution prevention, while undertaking coordinating and advisory functions in the area of natural resource management.

Direct responsibility for land management in Malaysia lies with the relevant State Governments. However in Peninsular Malaysian states, land areas designated as Permanent Forest Estate (PFE) (e.g. South-east Pahang Peat Swamp Forest), are managed by State offices of the Federal Forestry Department, under the Ministry of Primary Industries. The Federal Forestry Department is responsible to ensure sustainable utilisation of Peninsular Malaysia's forest reserves, including PSF areas located within such Reserves.

It should be noted however that the Federal Forestry Department does not have jurisdiction over forest reserves in Sabah and Sarawak. In Sabah and Sarawak, management of forest reserves is the responsibility of individual state Forestry Departments which are not linked to the Federal Forestry Department. In Sarawak the state Forestry Department (through the Sarawak National Parks and Wildlife Office) is also responsible for national parks, some of which contain PSF habitats.

Given the above, the Sabah Forestry Department, Sarawak National Parks and Wildlife Office and the Pahang office of the Federal Forestry Department will play lead roles at each project site. However, effective management of PSF areas will also depend upon proper management of neighbouring lands and related functions such as hydrological management and pollution control. Thus there will also be a need for close coordination with a range of other Federal, State and local authorities.

The institutional framework for the present project is thus a complex one, not only from a **sectoral** perspective, but also from the perspective of different **levels** of government (federal, state and local). This section summarises what are, from the perspective of the project, the most important institutional elements within these various sectors and levels.

At the **Federal level**, the following agencies are of particular relevance for the project:

<b>Agency</b>	<b>Duties/ Relevant responsibilities</b>
Economic Planning Unit, Prime Minister's Department	Government focal point for international donor assistance. Also responsible for Government budgetary planning and development strategies, including programming of the project's Government co-financing.
Forestry Department, Ministry of Primary Industries	Coordinates and assists in the forestry activities of the various states, including normative and research issues.
Ministry of Science, Technology and the Environment (MOSTE), including the Federal Department of the Environment (DOE)	Formulates and coordinates policies, strategies and action programmes related to conservation and the environment. Also serves as focal point for international environmental cooperation, including the Ramsar and Biodiversity Conventions, and as focal point for the GEF in Malaysia.
Ministry of Culture, Arts and Tourism (MOCAT)	Responsible for developing and promoting the tourism industry in Malaysia, including ecotourism.
Forest Research Institute of Malaysia (FRIM)	Responsible for conducting research and development activities on forestry and forest-based industries.
Drainage and Irrigation Department	Responsible for the management of rivers, waterways and hydrological resources in Peninsular Malaysia

It should be noted that, given the nature of the Malaysian Federal system, the relevance of the above agencies largely relates to management of peat swamp forests within Peninsular Malaysia. Thus, of the three project sites, the Pahang site is most directly linked to these Federal bodies. Also of potential relevance are other PSF areas within Peninsular Malaysia, e.g., in the states of Selangor and Johor, which may ultimately seek to replicate the results of the GEF project.

In **Pahang**, in addition to the above Federal bodies, relevant state agencies include the following:

<b>Agency</b>	<b>Duties/ Relevant responsibilities</b>
Pahang State Forestry Department	Responsible for operational forestry management within the state.
State Economic Planning Unit (SEPU)	Responsible for budgetary management and disbursement of funding allocations, including coordination of Government co-financing and in-kind contributions.
Orang Asli Affairs Department – <i>Jabatan Hal Ehwal Orang Asli</i> (JHEOA)	Responsible for the welfare of the various Orang Asli communities in Peninsular Malaysia, including the Jakun communities in the Site area. The Department provides welfare assistance, skills training and other human development programmes and social services such as childcare, community halls, etc. It is also responsible for the planning and development of Orang Asli Resettlement Schemes such as RPS Runchang.
Drainage and Irrigation Department Pahang	Responsible for management of rivers and inland watercourses in the State, including the Bebar and Merchong rivers which run through the SEPPSF area.
South-east Pahang Development Authority (DARA) & Successor Corporation	Responsible for all local planning, economic development and local authority functions in the area. However, DARA is due to be dissolved in 1999, at which time its local authority and planning functions will revert to the <b>Pekan District Office</b> (in the Site area) and possibly a new Local Authority in Bandar Muadzam Shah. However, it is understood that a <b>Successor Corporation</b> consisting of DARA management and private sector interests is to be constituted to assume some of the economic development and commercial functions of DARA. This would include management of the various subsidiary corporations and agricultural plantations currently owned by the Authority.
Pekan District Office	Upon the dissolution of DARA (see above), local authority functions in the Site area will revert to the Pekan District Office, which will then assume responsibility for issues such as land titles and demarcation, drainage and irrigation (under the District Drainage and Irrigation Department), infrastructure development and maintenance, etc.



Pahang State Economic Development Corporation (PKNP)	<p>Agricultural and aquaculture activities in the areas surrounding the Pahang project site generally take place on lands leased from the State Economic Development Corporation. This includes most of the oil palm plantations in the area, as well as the Song Cheng Enterprises aquaculture farm.</p> <p>Land that is earmarked for development is transferred by the State Government to PKNP, which then leases the land to private sector concerns or other Government agencies, in exchange for either lease payments or equity interest in the development project.</p>
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In **Sabah**, the following state and local Government authorities are of particular relevance:

Agency	Duties/ Relevant responsibilities
Sabah Forestry Department	Headquartered in Sandakan, SFD is directly responsible, <i>inter alia</i> , for management of forest reserves at Klias Peninsula.
Beaufort District Office	Plays a key role in integrated development planning, processing of development approvals and land conversion applications.
Ministry of Tourism Development, Environment, Science and Technology	Responsible for ecological conservation and environmental protection functions in Sabah, as well as for the promotion of tourism (including ecotourism).
Ministry of Agriculture Development and Food Industry	Handles freshwater fisheries and aquaculture projects in the area.
Ministry of Town and Country Planning	Has responsibility for land use planning and development zonation, including preparation of District Development Plans and Structure Plans.
Land and Survey Department	Responsible for surveys and demarcation of exact boundaries of Forest Reserves, including proposed extensions. It should be noted in this context that FR boundaries remain unclear in places.
Department of Drainage and Irrigation	Responsible for management of rivers, canals and overall hydrology, including Bukau and Api-Api Rivers, plays a key role in flood mitigation.
Department of Agriculture	Promotes agricultural and rural development
Department of Fisheries	Manages aquaculture/ fishing reserves
Wildlife Department	Protection and management of wildlife reserves, i.e. flora and fauna including control of hunting
Enactment Conservation Department	Responsible for environmental protection including Environmental Impact Assessments on land development activities.
Natural Resources Office	Coordinate, formulate and develop policies on natural resources, i.e. land, forestry and mining. Is a crucial link between agencies and the State Cabinet on policy-making.
State Economic Planning Unit	Plays a key role in coordinating the implementation of government development plans and is responsible for budgetary management and disbursement of funds.
Ministry of Local Government and Housing	Responsible for monitoring the implementation of socio-economic development and infrastructure projects by local authorities i.e. the District Offices.
Ministry of Rural and Entrepreneur Development	Responsible for planning and implementing socio-economic research programmes for rural communities, training programmes, human and community development and socio-economic development programmes.

In **Sarawak**, the following state and local Government authorities are of direct relevance to the project:

<b>Agency</b>	<b>Duties/ Relevant responsibilities</b>
Sarawak Forestry Department	In addition to management of LBNP through the National Parks and Wildlife Office (NPWO), the Sarawak FD also oversees logging operations in the vicinity, including the Samling Corporation and Rimbunan Hijau Sdn. Bhd. log ponds.
State Planning Unit	Is responsible for budgetary management and disbursement of funding allocations, including baseline funding for Park facilities under the NPWO.
Natural Resources and Environment Board	Responsible for environmental protection, including Environmental Impact Assessment and post-EIA monitoring of oil palm plantations and logging operations in the Park vicinity, and monitoring of water quality in the boundary rivers.
Land Custody and Development Authority (PELITA)	A state development authority; landowner and joint-venture partner in the Loagan Bunut, Sungai Lelak, Bukit Limau and Rimbunan Pelita oil palm plantations in the Park vicinity.
Sarawak Tourism Board	Responsible for tourism marketing and promotions, including potential marketing of Loagan Bunut as an ecotourism destination.
Ministry of Tourism	Responsible for tourism promotion activities, including promotion of eco-tourism development in Loagan Bunut. The Sarawak Tourism Board acts under the supervision of this ministry.
Sarawak Biodiversity Center	Is responsible for evaluating research proposals on the biodiversity of the project area; to provide all necessary clearances and permits pertaining to any research activities in the project area and to ensure that all materials obtained from the project are made available to the SBC's depository in accordance with its ordinance and regulations.
Ministry of Planning and Resource Management	Responsible for planning and resource management activities for the State Government.
Drainage and Irrigation Department	Responsible for management of rivers, canals, lakes and overall hydrology, plays a key role in flood mitigation.

## **A.5 PRIOR AND ONGOING ASSISTANCE TO THE SUB-SECTOR**

There has been no GEF or UNDP assistance in conserving PSF areas in Malaysia, with the exception of the PDF-B grant under which this present project was developed. This PDF-B grant totalling USD319,000 was provided to the Ministry of Science, Technology and the Environment in 1996. It funded the preparation of a Project Brief (which was approved by the GEF Council in May 1999) as well as the preparation of the initial draft of this Project Document. Finalisation of this Project Document was funded in part by UNDP Malaysia.

The earliest major research on PSF in Malaysia concerned logged-over forests, where a research project on *Successional Development of and Management Options for PSF* was conducted during the period 1989 to 1994. This research was conducted by FRIM and the Selangor Forestry Department in collaboration with Georg-August University, Gottingen, Germany, and funded by the German Research Foundation (DFG).

The largest ongoing assistance project within the sector is a Forestry Department / DANCED project, “*Sustainable Management of Peat Swamp Forests, Peninsular Malaysia*”, which has been underway in Selangor and Pahang states since September 1996. Its overall objective is to contribute to the management of Peninsular Malaysia's PSFs for sustained social, economic and environmental benefits.

The project is collecting baseline information on hydrology, biodiversity, and socio-economic aspects and will prepare guidelines (due for completion by mid-1999) for sustainable management, including guidelines for reduced impact logging. Also being supported is the establishment of a small Virgin Jungle Reserve (VJR)

where growth and regeneration studies are currently being undertaken. However, no actual management plans will be prepared.

DANCED also supports the Sabah Biodiversity Conservation Project of the Sabah Ministry of Culture, Environment and Tourism. Extensive work was undertaken in the Klias Peninsula under the Identification of Potential Protected Areas (IPPA) component of this Project, including a series of Background Papers which provide valuable baseline data on the area. The IPPA report on Klias Peninsula<sup>18</sup> also identified the proposed extension to the Klias Protection Forest Reserve which forms part of the core zone of the current project.

One important recent initiative to conserve peat swamp forests is the establishment of the Malaysian Wetland Sanctuary in the State of Selangor, managed by the Malaysian Wetland Foundation. This protected area is being established within an area surrounded by large-scale development projects, including a new international airport, administrative capital and a information technology development zone (Multimedia Super Corridor). The Government of Malaysia has attached a high priority to this conservation project, as evidence of which the State has indicated that it is willing to forego the development potential of the Sanctuary site.

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<sup>18</sup> Junaidi Payne and Justine Vaz (1998); *Sabah Biodiversity Conservation Project, Identification of Potential Protected Areas Component: Klias Peninsula Final Report*, Ministry of Culture, Environment and Tourism Sabah.

## SECTION B: PROJECT JUSTIFICATION

### B.1 PROBLEMS TO BE ADDRESSED: THE PRESENT SITUATION

Malaysia's tropical peat swamp forests (PSFs) are highly significant globally, both for their diverse and threatened species, and as representative unique ecosystems. They are under threat from a variety of activities, including conversion, drainage and unsustainable logging. The global biodiversity values that are found in Malaysia's tropical PSF ecosystems are exemplified by the three sites selected for the present project, each of which represents a distinct PSF ecosystem complex in Malaysia. The three project sites collectively support at least sixty globally-significant species of plants and animals.

Threats to Malaysia's PSFs and to the global biodiversity values inherent in them emanate from a variety of sources, although individual sites may be subject to only a sub-set of these threats. The main threats are the following:

- **Conversion to other uses:** Development policies have traditionally aimed at conversion of PSF areas to more 'productive' uses, such as agriculture, aquaculture and industry. As a result, the proportion of Malaysia's peatlands remaining under forest cover has decreased steadily in recent decades. In 1954, forest coverage of peatlands in Peninsular Malaysia was some 497,000 ha, or about sixty percent of the estimated 809,000 ha of peatlands; by 1992, forested area had fallen to an estimated 340,000 ha, or about forty percent coverage. Since then, the rate of decline has increased and today little more than 200,000 ha may remain. Much of the remaining forest area is found in a nearly contiguous stretch in the SEPPSF.

In the case of East Malaysia, the Sarawak state government has allocated 300,000 ha of PSF for conversion to oil palm plantations under the 7<sup>th</sup> Malaysia Plan (1996-2000). Beyond the year 2000, a further 900,000 ha has been earmarked for possible conversion to oil palm. While some successful examples exist, many agricultural conversion schemes have faced serious environmental difficulties, particularly when attempted on so-called 'deep peat' soils (more than 2 meters in depth). Many peat swamp-dependent species face a high risk of extinction in cases where conversion or severe degradation takes place.

- **Drainage:** Drainage is necessary to convert PSF to other uses, as well as for timber extraction. Current practices lay indiscriminate drainage systems, often resulting in irreversible lowering of groundwater tables, and drying-out of peat substrate. This results in subsidence and loss of substrate, acidification of exposed soils and extreme fire hazard. Drainage for agriculture may affect both cleared land as well as nearby remaining forest areas. In 1997 several Malaysian states (along with neighbouring Indonesia) faced serious problems with PSF fires, and such fires may well recur in the near future depending on seasonal weather patterns.
- **Timber extraction:** Current logging practices have been a significant cause of degradation of remaining PSFs. The widespread use of the 'traxcavator and canal' system causes severe damage to the habitat and compaction of the soil, leaving little chance for regeneration. The use of canals in particular can create a process of drainage that, once well advanced, can be irreversible. In addition to commercial logging, illegal encroachment and removal of logs (albeit generally on a small scale) constitute further threats.

- **Hunting:** In addition to direct loss of habitat, wildlife has been hunted in PSFs at very high levels, far exceeding carrying capacities of lowland tropical rainforest ecosystems. Deer and wild boar populations have been reduced to very low levels, hornbills have been wiped out over parts of their ranges and species like the *orang utan*, which reaches its highest densities in PSF, are now facing an immediate threat of extinction.

### B.1.1 Loagan Bunut National Park, Sarawak

The main **threats** leading to wetland degradation and loss of biodiversity in the “core zone” of LBNP are:

- *Illegal resource extraction*, i.e., small-scale timber extraction, fishing and hunting,
- *Encroachment*, i.e., settler longhouses, small-scale agriculture, log ponds and local population encroachment,
- *Potential for increased eutrophication in the lake* in the event of increased oil palm development in the statelands outside the park.

In the remainder of the park, i.e., the “buffer zone,” **threats** stem from the *potential decline in water quality* associated with agricultural development and *ecological isolation* due to loss and fragmentation of surrounding habitat, and degradation of wildlife corridors and riparian zones. (The PSF “core zone” is largely buffered from the impacts of oil palm effluent since drainage from plantation areas flows mainly to the two major rivers; activities to counteract these water quality problems are therefore only required to mitigate indirect impacts on the PSF.)

Current **baseline activities** to counter these threats are severely limited. There is no permanent Forest Department (FD) presence at the park, partly due to lack of finance to develop infrastructure and a management plan. FD rangers conduct sporadic visits to investigate reports of illegal tree-felling by locals. A Ministry of Culture, Arts and Tourism grant has been received to fund the provision of limited eco-tourism related infrastructure in the Park area and initial activity has commenced, however a permanent presence has yet to be established.

Other baseline activities are: State government funding for training forest rangers, a central Geographic Information System (GIS) unit based at the State Planning Unit (SPU) and implementation of a Wildlife Masterplan for Sarawak. The Sarawak Biodiversity Centre, funded by the State Government, has begun construction in 1999, whilst a Forest Management Information System, Sarawak (FORMIS) is based at the FD and is funded by the State with assistance from GTZ.

If current **baseline trends** continue, there would be limited active management or park infrastructure on the ground, a lack of comprehensive management planning as well as continuing encroachment and illegal resource use by people not having Native Customary Rights (NCR). The result would be degradation of ecosystems, loss of biodiversity, loss of sustainability and loss of globally threatened species.

### B.1.2 Klias Peninsula, Sabah

**Threats** to the ecology of PSF areas constituting the Klias Peninsula “core zone” may be summarised as follows:

- *Degradation of PSF habitats:* Drainage of neighbouring lands for agriculture can alter floristic composition as well as increase fire risk. However, threats along the boundaries of the core zone are limited by the fact that the agricultural areas are located **upstream** from the FR, which means there is unlikely to be significant baseflow out of the PSF and into these lands.<sup>19</sup> A more serious threat potentially would be from drainage of areas to the south of Klias FR, which lie along its drainage gradient. However, this area has extremely poor, deep peat soils and is an unlikely candidate for agricultural use.
- *Loss of ecological integrity due to human activities inside protected areas:* This threat mainly involves *hunting*, extending to threatened species such as proboscis monkeys and crocodiles.

The main threat in the wider buffer zone is *agricultural development*, involving drainage and forest clearing, in areas north and north-east of the buffer zone. In addition, *uncoordinated development* also poses a significant potential threat. Plans have recently been announced to promote large-scale light industrial development projects in the Peninsula, as well as tourism development focused on coastal and mangrove areas. If such projects are not developed within the framework of integrated, ecologically-sound development plans, significant damage from pollution, uncontrolled drainage and habitat destruction may occur.

As far as **baseline** activities are concerned, the Ministry of Tourism Development, Environment, Science and Technology (MTDEST) and DANCED, with technical support from the World Wide Fund for Nature, is currently implementing a Sabah Biodiversity Conservation Project, which includes, *inter alia*, proposals for extensions to Protected Areas in Klias. Their recommendations include three such extensions, totalling approximately 5,000 ha, which have a strong likelihood of being accepted by the State.<sup>20</sup> One such area, known as ‘Bukau Api-Api’ after the rivers which it surrounds, lies along the above-mentioned southern edge of Klias Forest Reserve.

If current baseline trends continued, there is a strong likelihood that development would take place in a manner that failed to provide adequate protection to globally-significant biodiversity, which in this case would remain threatened.

### B.1.3 South-east Pahang PSF

In the two SEPPSF “core zones”, the main **threat** arises from *human activities within PFEs*, most significantly the potential effects of planned timber harvesting and, to a lesser extent, hunting. If the DANCED guidelines (see section E.3.1) are not carefully implemented and developed into biodiversity-friendly site-specific management plans, significant damage to PSF biodiversity could still result. In the surrounding “buffer zone,” the logging threat is supplemented by *loss of hydrological integrity* due to uncontrolled drainage of neighbouring peatlands for agriculture, as well as intensive groundwater extraction.

If current **baseline trends** were to continue, the focus of forest management would be on following-up the current DANCED-funded project by attempting to ensure successful and sustainable management. Such follow-up would aim to promote sustainable forest management in terms of environmental, economic, and social criteria, including attention to impacts on biodiversity. However, there would not be adequate technical and financial capacity to fully ensure biodiversity conservation, leading to loss of representative habitats and species.

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<sup>19</sup> This is according to hydrological studies commissioned by the PDF-B project and by WWF. This contrasts for example, with the situation in Pahang, where drainage is taking place on statelands downstream from the forest reserves.

<sup>20</sup> Planned intervention by the GEF-led project is already increasing momentum for gazettement of these areas.

## B.2 EXPECTED END OF PROJECT SITUATION

The expected results of the project can be summarised as follows:

- Successful **demonstrations** of biodiversity conservation and sustainable resource utilisation systems at three different and distinct PSF areas.
- The establishment of systems and processes for the **planning** of biodiversity conservation and sustainable resource utilisation in peat swamp forests (PSFs).
- **Strengthened** institutional and human technical **capacities** for and **awareness** of PSF biodiversity conservation in Malaysia.

These results will be reflected in a series of outputs, which are summarised as follows:

- Well-functioning monitoring, data collection and information management systems:* Data-gathering technologies will be used for mapping and biodiversity analysis. Better data will emerge regarding endangered and threatened species. The resulting ecological data and assessments will be available for improved decision-making and management planning. In addition, information will be collected through PRA techniques concerning the relationship of local communities to PSF areas. Substantial global and national benefits should result over the current baseline situation wherein little information on PSF ecosystems is collected, analysed or acted upon.
- Management Plans:* Building on the newly-available information generated through the above output, strategies or action plans will be developed in specific areas such as threatened species protection, fire prevention, ecotourism, control of hunting and encroachment, etc. These action plans will then be harmonised into an integrated management plan for each site. This process will highlight the benefits gained from a well-planned approach to management of PSF areas. It will also help to ensure that global considerations are given due weight in pilot and other activities to be undertaken at each site. While not completely separable, action plans aimed at, for example, globally threatened species will generate primarily global benefits while those aimed, for example, at managing water use will generate mainly national benefits.
- Implementation / Demonstration:* Creating sustainable examples of PSF sites which demonstrate globally significant and other biodiversity being conserved and PSF resources being sustainably used is a central objective of the project. This output will involve on-the-ground efforts at each site, with corresponding national and global benefits at the site and for other areas through a demonstration effect. In the area of biodiversity conservation, equipment and support for management activities such as boundary demarcation will also be provided. Together, these efforts will ensure real site-level changes and improvements in habitat quality, and thus maintained or increased levels of biodiversity (national and global benefits). Efforts will be made to enlist the support and cooperation of local peoples living in the vicinity of the PSFs. Reduced levels of illegal hunting, logging and encroachment are expected as a result (national and global benefits), as well as increased and more sustainable levels of income for local people (national benefit).
- Coordinated Government Agencies:* In order to enhance the key role of inter-sectoral co-ordination, the project will support the establishment and technical work of wetland management committees. The resulting decline in inter-agency conflict will lead to more efficient and sustainable use of PSF

resources, e.g., water, timber, etc. (national benefit) while also decreasing the risks facing globally-significant biodiversity (global benefit).

- (v) *Enhanced Awareness:* Awareness of the national and global values generated by PSFs and associated wetland ecosystems will be increased. Target groups will include local communities, decision-makers, managers and the general public. Increased levels of awareness will generate both global and national benefits by helping to ensure that adequate importance is given to Malaysia's biodiversity (globally significant and otherwise) and that greater efforts are made to ensure its conservation and sustainable use.
- (vi) *Strengthened Technical Capacities:* Institutional and human capacities to conserve and sustainably manage biological diversity in PSFs and associated wetland ecosystems will be strengthened. Training and educational curricula will be made available for this purpose. Combined with baseline efforts, these will ensure that forest reserves and parks containing globally significant PSF biodiversity are managed by knowledgeable staff. Again, both global and national benefits will ensue.

These outputs together will help to ensure that remaining PSF areas in Malaysia are managed, and their utilisation planned, in a systematised and sustainable manner to conserve the globally-significant biodiversity values present therein. Scientific and technical capacities and knowledge will be enhanced, and more comprehensive and systematic PSF area management strategies will be developed, which will be applicable across a range of PSF areas and forest types. The end of the project will see comprehensive management plans and resource utilisation strategies put in place to ensure the preservation of critical biodiversity values at each of the three project sites.

Beyond the lifespan of the project, the outputs, activities and objectives being addressed will be sustained through the demonstrated commitment of the key counterpart agencies involved, i.e. the Forestry Departments of Peninsular Malaysia, Sabah and Sarawak, the various State and Federal Economic Planning Units and respective the State Governments. The Project's objectives, if achieved, will demonstrate the value of policy changes to address and incorporate conservation of tropical PSF areas into the policymaking processes and developmental objectives of the various levels of Government. All of the Project's activities will be undertaken in close cooperation with key counterpart bodies such as the Forestry Departments, and based upon the degree of commitment shown to date it is anticipated that the continuation and widespread replication of the Project's successes is ensured.

### **B.3 TARGET BENEFICIARIES**

The target beneficiaries of the projects can be divided into two groups. The first group consists of the direct beneficiaries—bodies or agencies that will receive direct assistance, funding or support from the proposed activities. These are mainly the Government agencies through which project activities will be implemented. The second group is the indirect beneficiaries—those communities and sectors of society whose quality of life will be improved, either directly or indirectly, by the activities and outputs of the project. Each component of the project (the National component and three State components) has its own group of direct and indirect beneficiaries, and these are summarised in the following table:



**Table 1: Beneficiaries and benefits**

	<b>National</b>	<b>Sarawak</b>	<b>Sabah</b>	<b>Pahang</b>
<b>DIRECT BENEFICIARIES:</b>	Ministry of Primary Industries	National Parks and Wildlife Office	Sabah Forestry Department	Forestry Department, Pahang
<b>INDIRECT BENEFICIARIES:</b>				
Local Community	<b>None</b> – activities are national in scope and not site-specific	<b>Long Teru Berawan community:</b> reduced flooding; employment in Park management and ecotourism activities; more sustainable fishing practices in Loagan Bunut, to which they have exclusive rights. <b>Iban longhouses:</b> <sup>21</sup> employment opportunities in Park management and ecotourism activities.	<b>Local Villages:</b> <sup>22</sup> reduced flooding, droughts and fire risk; better coordinated development planning; employment opportunities in FR surveillance efforts; improved and sustainable fishing yields from preservation of freshwater fish and prawn breeding areas; ecotourism opportunities.	<b>Orang Asli villagers</b> <sup>23</sup> : employment opportunities; improved hydrology will preserve well-water supplies; preservation of PSF areas as a socio-cultural and livelihood resource; more sustainable NTFP resources; curbs on illegal sport hunting will preserve fauna stocks.
Surrounding Population	<b>None</b> – as above	<b>Other settlements:</b> <sup>24</sup> improved hydrological management will lead to reduced incidence of flooding along Batang Tinjar and Teru rivers.	<b>Beaufort &amp; other Klias Peninsula villages:</b> improved hydrology ensures longer-term sustainability of water supplies; reduced fire risk and consequent haze problems; increased ecotourism activities will have spill-over income multiplier effects; improved development-planning capacity at District Office will have spill-over effects on the rest of the Peninsula.	<b>Coastal villages and towns:</b> improved hydrology leading to preservation of the water table and well-water supplies; averting PSF fires reduces risk of crop loss through fire contagion as well as reducing incidence of forest fire haze and airborne pollution.

<sup>21</sup> Specifically the Iban longhouses along the Batang Tinjar river, between Lapok and Long Teru. Detailed descriptions are provided in the Stakeholder Consultation Annex.

<sup>22</sup> The villages of Lingkungan, Inuman, Meraba, Pulaimanang and Bukau, which are closest to the Forest Reserves. Refer to the Stakeholder Consultation Annex for detailed descriptions.

<sup>23</sup> Refer to the Stakeholder Consultation Annex for a detailed list of Orang Asli villages in the vicinity of SEPPSF, and descriptions thereof.

<sup>24</sup> Lapok village, surrounding plantation & logging camps and other longhouses in the vicinity, including Marudi town.

**Table 1: Beneficiaries and benefits**

	<b>National</b>	<b>Sarawak</b>	<b>Sabah</b>	<b>Pahang</b>
Population of each State	Use and existence values of the site Ecotourism revenue, including spillover tourist activity and improved marketing image from conservation efforts. Reduction in haze and airborne particulate pollution from PSF fires.			
Cooperating Agencies	<b>MOSTE/ DOE:</b> improved technical capacity for PSF monitoring and pollution control, through involvement in training and capacity-building programmes. <b>FRIM:</b> subcontracts and consultancy services <b>INTAN:</b> revenues from involvement in designing and implementing training activities.	<b>NREB:</b> improved technical capacity for PSF monitoring and pollution control, through involvement in ecological monitoring at LBNP, training and capacity-building programmes. <b>Miri District Office:</b> improved capacity for integrated development planning, particularly for factoring in PSF management priorities. <b>DID:</b> increased technical capacity for hydrological management. <b>Pelita:</b> better hydrological management will reduce incidence of flooding and inundation in surrounding Pelita land. <b>Sarawak Biodiversity Center:</b> increased technical capacity through involvement in biodiversity-related activities, including biodiversity management planning and awareness activities.	<b>Beaufort District Office:</b> Increased technical capacity for integrated development planning, including development and utilisation of biodiversity overlays. <b>MOCET:</b> indirect assistance in both environmental conservation and ecotourism promotion efforts, focused on the Klias Peninsula.	<b>JHEOA:</b> involvement in PRA and stakeholder consultation activities with Orang Asli communities will improve the Department's participatory planning capacities. <b>Pekan District Office:</b> increased technical capacity for development planning, particularly for statelands surrounding SEPPSF. <b>State DOE:</b> improved technical capacity for PSF monitoring and pollution control.
Business/ Industry	<b>Tourism Industry:</b> new products and marketing opportunities, improved image from conservation efforts. <b>Timber Industry:</b> sustainable harvesting techniques which will improve long-term prospects of the industry and	<b>Tourism Industry:</b> new products and opportunities focused in LBNP <b>Plantations:</b> Improved hydrological management will help reduce flooding in surrounding plantations.	<b>Fishing Industry:</b> improved catches from preservation of breeding areas <b>Plantations:</b> better hydrological management reduces fire risk, better development planning will mitigate the impact of uncontrolled development.	<b>Plantations:</b> Better hydrological management reduces fire risk, particularly fire contagion from dried PSF areas. <b>Timber Industry:</b> sustainable harvesting techniques will improve long-term prospects of the industry

**Table 1: Beneficiaries and benefits**

	<b>National</b>	<b>Sarawak</b>	<b>Sabah</b>	<b>Pahang</b>
	improve access to developed country markets, particularly Europe.		<b>Tourism Industry:</b> New products and markets from riverine ecotourism tourism activities in Klias Peninsula.	<b>Dara Successor Company:</b> comprehensive land-use management of PSF areas will improve longer-term prospects of existing assets in the area, e.g. dairy farms and plantations.
NGOs and Scientific Community	<b>Conservation NGOs:</b> consultancy opportunities and involvement in awareness campaigns and capacity-building programmes. <b>Universities:</b> short-term consultancy opportunities, exchange of information with consultants and other professionals brought in by the Project, especially during Workshops and other meetings. <b>Other scientific and technical professionals:</b> consultancy and subcontracting opportunities			

## B.4 PROJECT STRATEGY AND INSTITUTIONAL ARRANGEMENTS

The success of this complex project will depend largely on the effectiveness of its strategies for overcoming numerous challenges in the areas of **substantive**, **operational/institutional** and **financial** management. The project's strategy in each of these areas is outlined below.

### B.4.1 Substantive Strategy

#### B.4.1.1 Site components

The project's central strategy is to demonstrate biodiversity conservation and sustainable resource utilisation of PSF areas through a thematic range of activities at three distinctly different PSF sites. Each **site component** will be associated with a particular theme or problem facing management of PSF areas.

The three sites and site components are distinct from one another at a number of levels, including:

- *biologically*, including distinct habitats and threatened species;
- distinct *management regimes* are represented, namely: (i) a national park, (ii) protected forest reserves, and (iii) production forest reserves;
- different *Government systems and administrative structures*, i.e., in Peninsular Malaysia, Sabah and Sarawak;
- distinct sets of *threats*;
- a different *theme* being highlighted by activities at each site, associated with a particular *strategy* of the Biodiversity Action Plan.

In each case, the strategy involves sustainably removing all threats facing globally significant biodiversity within core protection areas (core zones), while mitigating threats within a broader buffer area (buffer zone). In addition to removing threats, the thematic approach to each of the three sites will contribute towards improved management of PSF for different functions, in different ways, in response to variations in habitat types, development activities and wise use options. In addition, the challenges involved in developing sustainable and 'global-environment sensitive' forms of management of these diverse sites represent a microcosm of the difficulties facing remaining tropical PSF ecosystems worldwide; lessons learned should therefore be widely applicable.

The themes and associated strategies of each site component are as follows:

- *Protected Area Management (LBNP)*: This component will demonstrate protected area management of PSF biodiversity through community wildlife management (CWM).<sup>25</sup> It will use CWM as part of a strategy to sustainably remove threats related to encroachment and illegal resource extraction, e.g., illegal logging, fishing and hunting. It will involve the establishment of a management presence at the Park, including key infrastructure and ranger patrols, etc., while involving local people, including participatory appraisals and development of alternative livelihoods (GoM financing). The component will also develop an action plan to avoid a potential decline in water quality due to oil palm development in the statelands surrounding the park. Utilising government co-financing, the development of ecotourism will be supported as a way of making the park more viable. This will also include the

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<sup>25</sup> Community Wildlife Management (CWM) is a participatory approach towards natural resource management where *community* is defined as all stakeholders and resources (e.g., local communities, oil palm managers, forest department, tour operators, etc.), *wildlife* covers all non-timber forest resources (including wildlife, fisheries, NTFPs, etc.) and *management* is the conscious effort to utilise natural resources in a sustainable manner.

provision of alternative livelihoods through, *inter alia*, revenues to support more active on-site management which will provide employment opportunities. Lessons from other sites in Malaysia<sup>26</sup> have shown that ecotourism has the potential to bring tangible benefits to local people in an area, but requires real participation on the part of all stakeholders.

- *Biodiversity Overlays and Integrated Land Use Planning (Klias)*: This component will demonstrate a multi-sectoral approach to integrated development planning over an extensive populated area comprising PSFs and associated wetland habitats. The threats in the core zone of PSF will be addressed through the preparation and application of biodiversity overlays to identify key areas for the conservation of globally significant biodiversity. Use of overlays in land-use planning will allow the most sensitive areas to be managed appropriately, and agricultural development plans to concentrate on less sensitive areas. To complement this approach, the project will also support the establishment of an extension to Klias Forest Reserve. The project will seek to eliminate hunting as a threat through a combination of enforcement and awareness-building, and the provision of co-financed alternative livelihoods, such as forest restoration and management. A Wetlands Management committee will be established in order to help coordinate and reconcile various sectoral viewpoints.
- *Conservation and Sustainable Resource Utilisation (SEPPSF)*: This component will demonstrate methods for ensuring sustainable uses—including logging and use of non-timber forest products—of PSF biodiversity within a forest reserve management system. This will include seeing to it that activities within and around the forest reserves do not threaten the reserves' ecological integrity. A forest management plan, including biodiversity overlays, will identify sensitive areas in which logging will be minimised or even banned, while the intensity of any planned logging in less sensitive areas will be adjusted so as to maintain the total yield as close to “normal” as possible. Set-aside areas will be established especially in the core zones, though the entire FR complex will be managed as a single unit.

The State Executive Committee, the highest-level decision-making body in the state, will endorse the resulting forest management plan in order to ensure that its provisions are strictly followed. In the surrounding buffer zone, *hydrological issues* will be addressed through a detailed management plan (co-financed) to be developed as an initial step of the project. Necessary consultations will be facilitated through the establishment of a Wetland Management Committee (WMC) that will allow planning and developments in neighbouring areas, e.g. drainage for oil palm plantations, to be fully integrated with the ecological needs of the forest. This consultation process will be similar to the model at Klias Peninsula, but less complex, due to the simpler mix of land-uses at SEPPSF.

#### B.4.1.2 National component

While a ‘site-centric’ approach is necessary to ensure effective implementation and ‘ownership’ by the individual states, a **national component** is seen as an essential complement in meeting a number of other objectives. These include the following:

- *Cross-fertilisation and economies of scale*: Implementation of common outputs of the site components, particularly awareness or capacity building, can benefit from a common approach, materials, consultants, etc. Lessons learned during implementation will thereby quickly be transferred from one site to another.

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<sup>26</sup> Batang Ai National Park in western Sarawak has demonstrated very successful integration of local communities into ecotourism initiatives linked to Orang Utan viewing. The project demonstrated greatly increased income levels within four participating long houses leading to reduced dependence on Park resources for their livelihoods.

- *Federal-level involvement:* While the project is strongly oriented towards a decentralised, site-specific approach, there are areas in which Federal Government involvement will be necessary and beneficial. These will include awareness raising, capacity building and information dissemination.
- *Dissemination and replication of lessons learned:* Packaging together the findings and results of the site components, e.g., ecological assessments, to share these with a wider audience is an important element of ensuring replication of project results.
- *Thematic site leadership:* Each site component will involve the demonstration of a particular theme associated with biodiversity conservation and/or sustainable use. Each site component, and each state, will thus serve as a key resource centre for activities related to its theme and will take the lead in hosting awareness and training events in which managers from other states may participate. These project-wide events will be coordinated under the national component.

The main areas of thematic focus under the national component will be awareness and capacity building. Specific activities are outlined in section D.

## **B.4.2 Operational and Institutional Strategy**

An effective operational strategy must take the existing institutional framework (see Section A.4) as a point of reference and design mechanisms that can fit effectively within this structure. At the same time, it should hope to affect that structure and its associated operating mechanisms in moderate, but constructive and sustainable, ways. The goal is a project that both operates effectively and leaves a sustainable impact.

### **B.4.2.1 National Component / Level**

Key individuals and operational structures at the national, or overall project, level including for those required for implementation of the national component, are as follows:

- **National Steering Committee (NSC):** The NSC, together with the executing agency (the Regional Centre for Forest Management), will be responsible for overall project oversight. It will meet for the first time within four months of project inception and then once in every six months for the first two years, and subsequently on an annual basis to review implementation of the various project components during the preceding year. It will also review and comment upon each component's WorkPlan for the coming year. Site component workplans will have previously been approved by the respective state Wetland Management Committees. The NSC will be chaired by the Secretary-General of the Ministry of Primary Industries or a nominated representative thereof. One or two representatives from each of the three participating State Governments will sit on the NSC. The NSC will also comprise representatives from the Economic Planning Unit, the Federal Forestry Department, Ministry of Science, Technology and the Environment, Drainage and Irrigation Department, Ministry of Agriculture, and UNDP/GEF. The project Executing Agency will also be represented on the NSC. Representatives from other Government ministries or agencies, the private sector, industry (e.g. timber and oil-palm), NGOs, etc., may join the NSC or act as observers upon nomination by any NSC member or the Project CTA, and invitation by the Chair.
- **National Project Director (NPD):** The NPD appointed by MPI is the Director of the Executing Agency, the Regional Centre for Forestry Management (RCFM). The NPD will carry out activities as directed by the NSC, and will also be responsible for monitoring adherence to the WorkPlan, which forms the basis for project execution. The NPD, with the assistance of the Project CTA, will act as the secretary for, and will report to, the NSC.

- **Project Support Unit (PSU):** The PSU will be based in at the Regional Centre for Forest Management. It will be responsible for implementing the national component as well as for monitoring, tying together and coordinating the individual site components (see 4.1.2 above). In addition, it will act as secretariat for the NSC. The PSU will liaise with UNDP, and will report to and work closely with the NPD. Staff will include a Chief Technical Advisor (CTA), three National Experts (who will be out-posted to the project sites), and support and clerical staff.
- **Project Executing Agency:** The Project Executing Agency will be responsible for financial and contractual administration of the project, including:
  - Recruitment and contracting of consultants
  - Issuance of sub-contracts
  - Procurement
  - Provision and management of office premises
  - Financial and technical reporting to UNDP/GEF and GoM
  - Monitoring and Evaluation (in support of M&E activities by UNDP/GEF)
  - Accounting and financial management, payment of fees and expenses, etc.

#### **The Regional Centre for Forest Management (RCFM)**

The Executing Agency nominated by the Government of Malaysia is the Regional Centre for Forest Management (RCFM). RCFM is the successor to the ASEAN Institute of Forest Management, and became operational on 1 January 1998. The Centre's primary mandate is to promote sustainable forest management at the regional level, particularly within ASEAN. The Centre is currently based at the Forest Research Institute of Malaysia (FRIM), however due to the rapid expansion of the Centre's activities (including *inter alia* its role as Executing Agency for this project) the Centre will be moving to new premises in Kuala Lumpur in April 2000. Close technical and operational cooperation will continue to be maintained with FRIM.

RCFM is managed by a special management committee under the Malaysian Forestry Research and Development Board, chaired by the Secretary-General of the Ministry of Primary Industries (also Chair of the Project's National Steering Committee). The Centre's mission is;

*"To promote sustainable forest management through cost-effective innovations, environmentally-sound technologies, comprehensive and updated information and effective policies."*

Within the framework of this mission statement, the Centre's main objectives are:

- *To assist government in monitoring and evaluating the implementation of activities towards sustainable forest management (SFM)*
- *To undertake forestry projects in various aspects of SFM such as forest information systems, criteria and indicators, forest management plans, certification, etc.*
- *To carry out regional projects sponsored or financed by donors or international agencies*
- *To enhance cooperation in forest-related programmes within ASEAN, and with other countries in the region*
- *To assist countries in the region in developing and upgrading expertise, capabilities and skills in forest management*
- *To be a centre of exchange and dissemination of information relevant to SFM.*

RCFM's activities are categorised under five programmes, which are:

- Forest Information Systems

- Forest Management and Planning
- Network for Model Forests
- Assessment of Sustainable Forest Management
- Training and Capacity-Building

A number of activities are being undertaken under these programmes. Projects of particular relevance include:

**1. Genetic Resource Conservation of Commercial Tree Species in Tropical Asia and the Pacific (funded by the International Tropical Timber Organisation)**

The major outputs of this project are:

- 1.1 Technical guidelines for the establishment and management of in-situ conservation stands of selected tropical timber species.
- 1.2 Technical guidelines for the establishment and management of ex-situ conservation stands of selected tropical timber species.
- 1.3 Operational plans for conservation of genetic resources of selected tropical timber species.

**2. Restoration and Management of Degraded Peat Swamp Forest at Paya Indah, Sepang, Malaysia**

Major activities being undertaken include development of planting techniques and guidelines for reforestation, and development of eco-tourism activities in this PSF area.

**3. Carbon Emission Sequestration Research Programme**

Major outputs of this on-going project include:

- 3.1 Maps on distribution and changes in carbon sinks in Malaysia
- 3.2 A computer database system on the distribution of and changes in carbon sequestration areas in Malaysia
- 3.3 A report on long-term projections for carbon sinks in Malaysia and its relationship to Sustainable Forest Management practices.
- 3.4 Policy recommendations to enhance carbon sequestration
- 3.5 Workshops and seminars to disseminate information generated by the project

**4. Perak Integrated Timber Complex**

Key activities undertaken under this project include:

- 4.1 Aerial surveys and field inventories for data collection and measurement of parameters including ground information, slope position, soil type, general flora and fauna, tree diameter at breast-height (dbh), commercial height, tree health condition, inventory of pole-sized trees, seedlings, bamboo and palms, plants and herbs of medicinal value, etc.
- 4.2 Preparation of a Forest Management Plan for the area

**5. Forest Inventory Pilot Projects in the ASEAN region**

Amongst the areas in which Forest Inventory pilot projects have been carried out are:

- 5.1 Labi Hills, Brunei Darussalam
- 5.2 Kerinci Seblat, Indonesia
- 5.3 TROFORM Pilot Project, Balikpapan, Indonesia
- 5.4 Negeri Sembilan, Malaysia
- 5.5 Lampang, Thailand
- 5.6 Surat Thani, Thailand
- 5.7 Dona Remedios, Philippines



- 5.8 Mount Makiling, Philippines
- 5.9 PICOP Pilot Project, Philippines

In addition, RCFM and its predecessor AIFM have been organised several workshops, conferences and meetings in related areas, including:

- National Workshop on Forests and Carbon Sequestration (1999, Malaysia)
- ASEAN Experts Meetings on Criteria and Indicators, and Regional Workshop on Strategies for Genetic Resource Conservation of Tropical Timber Trees (1999, Kuala Lumpur)
- 2<sup>nd</sup> ASEAN Expert Meeting on Criteria and Indicators for Sustainable Forest Management (1999, Brunei)
- ASEAN Seminar on Land Use Decisions and Policies: Will Tropical Forests Survive Their Impact (1991, Malaysia)
- ASEAN Seminar on Tropical Forest Management: Progress towards achievement of the ITTO Year 2000 Objective (1996, Indonesia)
- Social Forestry as an approach to Sustainable Forest Management: The ASEAN Social Forestry Seminar (1995, Philippines)
- National Workshop on Philippines Forest Tree Genetic Resources (1999, Philippines)
- International Conference on Transboundary Pollution and The Sustainability of Tropical Forests (1996)

Organisationally RCFM has a total staff strength of thirty-seven, of which seventeen are Professional and Sub-Professional staff, seven are Administrative and Finance staff and the balance are Research Assistants. The Centre is led by a Director, who is assisted by three Heads of Sections (Consultancy and Services, Resource Planning and Management and Information Technology).

#### B.4.2.2 Site Components

Given the decentralised nature of Malaysia's political system, particularly in the areas of land and natural resource management, the above site components will need to operate with a high degree of **autonomy**. It will therefore be necessary to provide substantial decision-making power over the operation of individual site components to state-level institutions, including the state forestry departments which will be most directly involved in implementation within each state. Each site component will therefore have a well-developed operational structure, including the following:

- **Wetlands Management Committee (WMC):** In order to ensure coordination with and among the full range of state Government departments which may be relevant to a particular site component, a Wetlands Management Committee (WMC) will be established within each state. This Committee will act as Steering Committee for the site component of the project, as well as facilitating, as and when necessary, a dialogue among various state agencies concerning issues of common interest related to management of the PSF areas. The terms of reference of this committee will be discussed during its first meeting. The respective State Government will nominate the Chairs of each WMC.

The Wetlands Management Committees for each State will be composed of representatives from the respective agencies, as listed below:

#### **Sarawak** *(to be confirmed by the Sarawak State Government)*

- 
- |                               |  |
|-------------------------------|--|
| • State Planning Unit (Chair) |  |
| • State Secretary's Office    | • Ministry of Rural and Land Development |
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• Forestry Department, Sarawak	• Drainage and Irrigation Department
• Ministry of Planning and Resources Management	• Natural Resources and Environment Board
• Sarawak Biodiversity Centre	• Ministry of Tourism

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### **Sabah**

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• Natural Resources Office (Chair)	
• Sabah Forestry Department	• Ministry of Tourism Development, Environment, Science and Technology
• Ministry of Local Government and Housing	• Environment Conservation Department
• Beaufort District Office	• Wildlife Department
• Ministry of Agriculture and Food Industry	• Department of Town and Regional Planning
• Land and Survey Department	• Department of Drainage and Irrigation
• Ministry of Rural and Entrepreneur Development	• State Economic Planning Unit

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### **Pahang** *(To be confirmed by Pahang State Government)*

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• State Economic Planning Unit (Chair)	
• Forestry Department, Pahang	• Pekan District Office
• Drainage and Irrigation Department	• Orang Asli Affairs Department (JHEOA)
• Pahang Agricultural Development Board (LKPP)	• Wildlife Department (Perhilitan)
• Department of Environment	• Tourism Pahang
• Land Office	

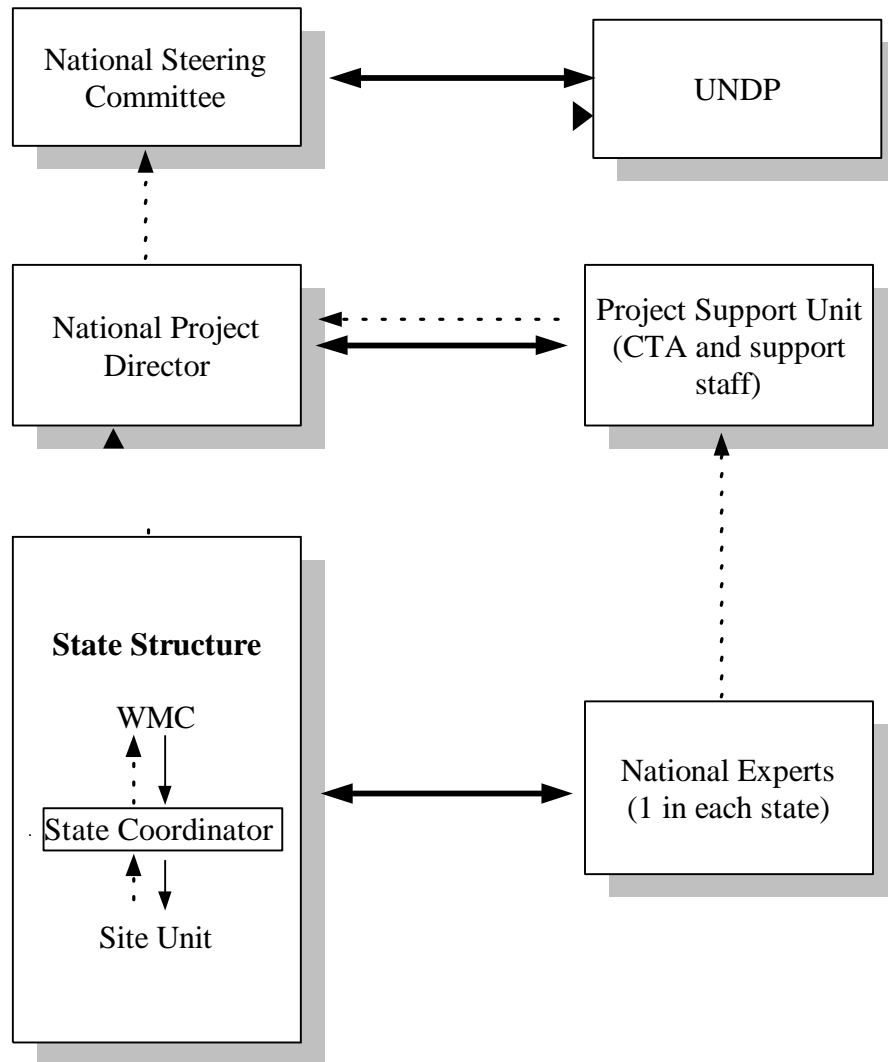
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- **State Project Coordinator:** Prior to the planned project inception meeting, each state shall nominate a State Project Coordinator, who will be the official channel of communication between the Project Support Unit (see below) and the State. The State Project Coordinator will receive frequent briefings from the national expert and/or the CTA on the progress of project activities. The role of the State Project Coordinator is described in Annex 3. The State Coordinators for each state are:
  - Sarawak: Director, State Planning Unit *(to be confirmed)*
  - Sabah: Director of the Sabah Forestry Department
  - Pahang: Deputy Director of the State Economic Planning Unit *(to be confirmed)*
- **Project site unit:** Each site component will maintain a modest project unit, most likely within the local office of the state forestry department. These units should be located within the vicinity of the project site, i.e., at the district forest offices in Miri, Pekan and Kimanis. Support staff for the units will be provided by the state forestry departments as part of their co-financing contributions to the project. These are described under Section E, Inputs.

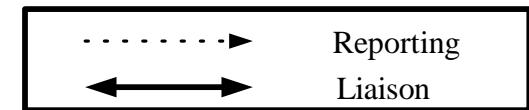
- **National expert:** Implementation of each site component will be guided by a national expert, with extensive experience in the specific theme that is being demonstrated at the site. The project's three national experts will have dual roles. First, they will be responsible for technical aspects related to implementation of their respective site components; for this reason, they will normally be based within the relevant project site office. In addition, the experts will be staff members of the PSU. They will be under the overall supervision of the CTA and will have responsibilities related to implementation of the other site components as well as the national component. They will thus be required to spend a portion of their time at other project sites as well as at the PSU. National experts will work closely with the site units, and will report to the PSU. Selection of national project experts will be on a competitive and transparent basis, to ensure the recruitment of individuals of the highest possible professional quality. Terms of reference for these national experts are provided in Annex 2.

Annex 3 includes a timetable for establishing the above structures, all of which will need to be set up as quickly as possible in order to ensure the rapid launch of field activities.

The proposed organisational structure for the Project is shown in the diagram below (see Figure 1).



**Figure 1:**  
**Project Organisational Chart**



### **B.4.3 National Execution arrangements**

The Project will be nationally executed by the Ministry of Primary Industries and implemented by the Regional Centre for Forest Management. UNDP Malaysia will assist the Government in providing requests for advances, and to make direct payments for goods and services provided to the project as and when necessary. The implementing agency shall request for cash advances by forwarding to UNDP a standard "Request for direct payment" form, duly completed and signed. All original documents shall be kept by the executing agency. The UNDP office will make available to the implementing agency documentation of all payment by UNDP (inter-office vouchers, disbursement vouchers, copies of cheques and other documents). The implementing agency will maintain records of all financial transactions of the project. (Refer Annex 5, request for direct payment and cash advance)

The Combined Delivery Report (CDR) which contains disbursements made by the implementing agency, UNDP office and UNDP headquarters for the periods ending 31 March, 30 June, 30 September and 31 December will be sent to the implementing agency for verification and certification. The CDR should be returned to the UNDP office within 30 days of receipt for filing. The year-end CDRs must be given to the designated auditors as soon as possible to facilitate their completion of the audit by the 30 April deadline.

As with all nationally executed projects, the Project must be audited at least once in its lifetime, at a minimum. The objective of the audit is to provide the UNDP Administrator with assurances that UNDP resources are being managed in accordance with:

- a) the financial regulations, rules, practices and procedures prescribed for the project;
- b) the project document and workplans, including activities, management and implementation arrangements, monitoring, evaluation, and reporting provisions;
- c) the requirements for execution in the areas of management, administration and finance.

A legally recognized auditor of the Government must conduct the audit. Please see the Guidance on Audit supplied that provides guidance on audit process, terms of reference and contract for the auditor, a standard outline audit report, as well as issues to assist the audit.

Prior to completion of UNDP's assistance for the Project, the GoM and the UNDP shall consult as to the disposition of all project equipment provided from UNDP funds. Title to such equipment shall normally be transferred to the Government or to an entity nominated by the Government, when it is required for continued operation of the project or for activities following directly therefrom. The UNDP, however, at its discretion may retain title to part or all of such equipment.

### **B.5 REASONS FOR ASSISTANCE FROM UNDP**

This project responds to a Government of Malaysia request for assistance in devising strategies to conserve and sustainably utilise PSF resources. Such a goal is fully in line with priorities established under Malaysia's

one of the priority areas under the Country Cooperation Framework (CCF) which serves as the Memorandum of Agreement between the Government of Malaysia and the UNDP governing their joint development activities over the period 1997-2001.

In terms of programming strategy, the CCF strengthens UNDP's comparative advantage in supporting a project of this multi disciplinary nature. The following programming strategies are particularly relevant to the project, thereby making UNDP to be best positioned to provide support in this regard:

- ◆ Applying the programme approach;
- ◆ Aiming at capacity building and institutional development;
- ◆ Representing catalytic initiatives that contribute to the development of the Federal, State and Local Government;
- ◆ Encompassing cross-thematic and cross-cultural concerns, whenever significant, to achieve the project objectives; and
- ◆ Adhering to extensive consultations with various stakeholders

The GEF contribution to the project of USD\$5.9 million will enhance national efforts to develop and implement plans and to encourage processes that will ensure the conservation and sustainable use of globally significant genetic, species and ecosystem diversity within tropical peat swamp forests and associated wetland ecosystems in Malaysia. This will contribute to implementation of the Malaysian Biodiversity action Plan, as well as Ramsar Convention, by providing demonstrations of conservation and sustainable management of peat swamp forests and associated wetlands ecosystem.

Finally, co-financing which UNDP-GEF have been successful in leveraging under this project supports many of the organisation's sustainable human development concerns, including concern for environment, women, sustainable livelihoods, etc. Such support would not have been forthcoming in the absence of UNDP-GEF support.

## **B.6 COORDINATION ARRANGEMENTS**

Coordination will be an essential factor in the successful implementation of this multi-site, multi-component project. Indeed, it is central to the project's operational strategy, as is outlined in section 4.2. Each of the operational structures described in that section will have a unique role in ensuring effective coordination. The forms of coordination that will be required and the roles of the various individuals and structures are as follows:

- **Coordination among the site components:** It has been noted above that one purpose of the national component and the PSU itself is to ensure cross-fertilization among the project sites. For this purpose, effective communications will be required between the PSU and the States, which will be ensured by the National Experts. The three site components will also coordinate directly amongst

- **Coordination with and among State Government Agencies:** At the State level, coordination with and among local agencies, district offices and State Government authorities will be ensured through meetings of the Wetland Management Committee (WMC). Responsibility for chairing these meetings, and for ensuring inter-sessional coordination with such agencies, will be with the State Coordinator. The Project Chief Technical Advisor and the site's National Expert will also maintain contacts with other state agencies, while keeping the State Project Director informed as to the nature of such contacts.
- **Coordination with other stakeholders and related activities:** In addition to the formal coordination mechanisms outlined herein, informal coordination with other stakeholders and related parties (e.g. NGOs, local stakeholders and communities, other PSF projects in the region, other conservation projects and activities) will be the joint responsibility of the Project CTA and State Coordinators, under the overall direction of the CTA. Project staff will at all times strive to maintain close and productive contact with all bodies and individuals who can contribute to the success of the Project, and will ensure that the activities of the Project are coordinated with any other related activities being undertaken, to minimise duplication of effort and wastage of resources.
- **Coordination with Sources of Co-financing:** Liaison with the agencies providing co-financing, and with the projects and programmes being financed, will be undertaken primarily by the Project CTA. At the state/site level, State Coordinators will be responsible for day-to-day coordination with co-financing bodies, and for ensuring suitable exchange of information between the core GEF Project and co-financed activities. In the event that formal contact with co-financing bodies is required (e.g. to negotiate changes to proposed activities), the NSC Chair will nominate a person (usually the Project CTA) to undertake such negotiations on behalf of the NSC and the Executing Agency. Where necessary any such changes or amendments will be ratified on behalf of UNDP by the Resident Representative.

## **B.7 COUNTERPART SUPPORT CAPACITY**

The project will benefit from counterpart support at both the Federal and State levels. There will be counterpart staff at the Ministry of Primary Industry, Regional Center for Forest management, and all three participating states. It is expected that by working very closely with the consultants in the project, a strong capability will be developed to subsequently implement the project, as well as to replicate the project in other states in Malaysia.

## **SECTION C: DEVELOPMENT OBJECTIVE**

The primary objective of this project is to develop and implement plans and to encourage processes that will ensure the conservation and sustainable use of globally significant genetic, species and ecosystem diversity within these forests. This will contribute to implementation of both the Biodiversity Action Plan and the Na-

This section is devoted to a presentation of the project by objective, output and activity. It includes references to activities supported through co-financing in order to show how these fit in with the overall strategy of GEF support. Activities that are either largely or wholly supported by non-GEF funds are indicated in italics, with the source of funding indicated in parentheses.

**OBJECTIVE 1: TO DEMONSTRATE THE NECESSARY STEPS IN PLANNING FOR BIODIVERSITY CONSERVATION AND SUSTAINABLE RESOURCE UTILIZATION IN PEAT SWAMP FORESTS**

A first step in achieving effective management and conservation of PSF areas is to improve management planning at individual sites. This includes planning of individual PAs as well as integrated planning of areas—often peatland areas—which remain hydrologically inter-connected to the PAs. Effective management planning depends critically, in turn, on the availability of accurate data and information on a variety of site-specific biological, hydrological and socio-economic factors. Outputs under this objective will therefore focus on information gathering, analysis and targeted research (mainly co-financed), followed by the preparation of management plans.

**Output 1: Data collection and setting up of a monitoring programme and information management system to facilitate management and decision-making**

*Sub-Output 1.1: Information/Analysis—LBNP*

- Activity 1.1.1 Conduct detailed ecological assessment to identify habitat and species distribution, and further specification of threats
- Activity 1.1.2 Assess hydrological regime of floodplain system
- Activity 1.1.3 Design and implement an ecological monitoring programme.
- Activity 1.1.4 Conduct additional participatory appraisals with local communities.
- Activity 1.1.5 Development and implementation of project monitoring and evaluation indicators

*Sub-Output 1.2: Information/Analysis—Klias*

- Activity 1.2.1 Conduct detailed ecological assessment of protected areas.
- Activity 1.2.2 Design and implement ecological monitoring programme for the reserves.
- Activity 1.2.3 Conduct detailed hydrological assessment of the peninsula (DANCED).*
- Activity 1.2.4 Collate information on current and planned land uses.
- Activity 1.2.5 Collect demographic and socio-economic data on the peninsula to integrate into the planning process.



- Activity 1.3.4 Conduct timber resource assessment (DANCED)
- Activity 1.3.5 Conduct participatory rural appraisals with local communities.
- Activity 1.3.6 Development and implementation of project monitoring and evaluation indicators

**Output 2: Well-formulated site management plans, addressing issues such as biodiversity, physical functions and sustainable use**

*Sub-Output 2.1: Management planning—LBNP*

- Activity 2.1.1 Determine zonation for LBNP, including buffer zones, activity zones, core protection zone and multiple-use zones.
- Activity 2.1.2 Develop a series of action plans covering species, habitats, hunting, hydrology, fisheries, ecotourism, etc.
- Activity 2.1.3 Develop a detailed participation plan for community involvement in park management.
- Activity 2.1.4 Develop alternative livelihood options for local communities, incorporating sustainable resource use and self-regulatory mechanisms.
- Activity 2.1.5 Integrate the above action plans into a comprehensive management plan.

*Sub-Output 2.1: Management planning—Klias*

- Activity 2.2.1 Formulate specific strategies / action plans to ensure effective conservation of globally significant species and habitats.
- Activity 2.2.2 Prepare integrated management plan (including zonation) for protected areas.
- Activity 2.2.3 Create biodiversity overlays using information from 1.2.1 – 1.2.5.
- Activity 2.2.4 *Formulate strategies for water management for protected areas and other peatland areas (DANCED).*
- Activity 2.2.5 Implement a public participation and feedback structure to integrate local community perceptions and priorities into the planning process.

*Sub-Output 2.3: Management planning—Pahang*

- Activity 2.3.1 Determine zonation for PFE Reserves, including core protection areas to be excluded from timber extraction, habitat corridors, riparian protection zones and buffer zones.
- Activity 2.3.2 Prepare biodiversity overlays
- Activity 2.3.3 Formulate specific strategies to ensure effective conservation of globally significant biodiversity (e.g., hairy-nosed otter, tiger, durian).
- Activity 2.3.4 *Formulate detailed forestry action plan, including strategy for logging operations which have minimum impact on core protection areas and are adaptable to different PSF habitats, as well as silvicultural and rehabilitation plans (DANCED).*

Having developed information and prepared plans for conservation and sustainable use, the project will turn to implementation at each of the three sites. This is clearly a necessary element in demonstrating that biodiversity is being conserved and resources used sustainably. This objective will include specific demonstration activities related to biodiversity conservation and sustainable use, as well as activities demonstrating an active process of inter-sectoral coordination. As a key element of the demonstration activities, both State and Federal Governments will have the clear responsibility of ensuring that changes related to land and water use in areas surrounding PSF—changes required to ensure sustainability of the PSF areas—do indeed take place. This process will be supported technically and through awareness activities (Objective 3), by the GEF project.

**Output 3: Conservation and sustainable use of peat swamp forest ecosystem resources and functions demonstrated**

*Sub-Output 3.1: Implementation/Demonstration—LBNP*

- Activity 3.1.1 Establish management presence at LBNP, including development of key infrastructure.
- Activity 3.1.2 Implementation of specific action plans and other elements of management plan, including management of river boundaries, riparian wildlife corridors and patrolling of National Park boundary.
- Activity 3.1.3 *Development of ecotourism infrastructure e.g. visitors' centre, boardwalks, etc. (Government)*
- Activity 3.1.4 Development of park interpretation, e.g. trails, signs, brochures, etc.
- Activity 3.1.5 *Implement community participation plan, alternative livelihoods and sustainable resource use strategies.(Government & GEF)*

*Sub-Output 3.2: Implementation/Demonstration—Klias*

- Activity 3.2.1 Implement species / ecosystem management and protection plans
- Activity 3.2.2 *Integrate results of conservation (2.2.1-2.2.3) and development (2.2.4, 2.2.5 and baseline planning activities) planning processes into a biodiversity conservation master plan for Klias Peninsula (GEF & DANCED).*
- Activity 3.2.3 *Support pilot activities in forest rehabilitation and enrichment planting in degraded peat areas (DANCED).*
- Activity 3.2.4 *Implement small-scale hydrological solutions (e.g. closing drains, inexpensive wooden weirs) in critical locations neighbouring Klias FR (DANCED).*
- Activity 3.2.5 *Implement strategy for alternative livelihoods (Government)*

*Sub-Output 3.2: Implementation/Demonstration—Pahang*

**Output 4: Inter-agency networks at State level to integrate biodiversity overlays into development planning on peatlands**

*Sub-output 4.1: Inter-sectoral coordination—LBNP*

- Activity 4.1.1 Co-ordinate with NREB on enforcement of proscribed activities under EIA.
- Activity 4.1.2 Co-ordinate with State development agencies (e.g. LCDA) & NGOs in development of alternative livelihood options for local communities.
- Activity 4.1.3 Mitigate potential impacts of development on LBNP through active coordination using existing mechanisms, for example Forest Department and DID inputs into land use planning and EIA review mechanisms and the Sarawak Biodiversity Centre oversight of biodiversity use and export of biodiversity resources.

*Sub-output 4.2: Inter-sectoral coordination—Klias*

- Activity 4.2.1 Establish and support operations of a Wetlands Management/ Project Steering Committee (NSC).
- Activity 4.2.2 Ensure appropriate institutional linkages to allow effective liaison with existing planning processes, e.g. local planning, EIAs and planning approvals.

*Sub-output 4.3: Inter-sectoral coordination—Pahang*

- Activity 4.3.1 Establish and support operations of a Wetlands Management / National Steering Committee, chaired by State Secretary and with appropriate inter-agency representation, to ensure biodiversity conservation and to minimise impacts on Forest Reserves of activities on surrounding peatlands.

**OBJECTIVE 3: TO STRENGTHEN INSTITUTIONAL AND HUMAN TECHNICAL CAPACITIES AND AWARENESS**

Awareness of the values of wetlands in general and PSFs in particular is a critical element in ensuring their conservation. Awareness of PSF values has been slow to build, but nevertheless is increasing steadily. The likelihood of survival of critical biodiversity within Malaysia's PSFs and associated wetland ecosystems will be greatly enhanced by effective and carefully targeted public awareness efforts, many focused on the findings of the project itself.

The various outputs and activities being planned under Objectives 1 & 2 to improve the management of PSF areas will fail to achieve their goals if capacities are not simultaneously developed. Management tools such as biodiversity overlays, as well as technical complexities associated with PSF management, will need to be in-

Activity 5.1.1 Design and implement campaign to raise awareness among local target populations re: significance and benefits of National Park

Activity 5.1.2 Seminars for high-level decision-makers to raise awareness of conservation and sustainable use of PSF areas.

*Sub-output 5.2: Awareness—Klias*

Activity 5.2.1 Design and implement awareness campaign aimed at local communities, decision-makers and planners; including public review and comments on the integrated management plan for Reserves and the biodiversity conservation master plan.

*Sub-output 5.3: Awareness—Pahang*

Activity 5.3.1 Design and implement awareness campaign aimed at local communities, decision-makers and planners. Local communities include native populations, surrounding commercial enterprises, etc.

Activity 5.3.2 *Conduct seminars and field visits to educate potential logging contractors on sustainable forestry practices and environmental significance of PSFs (DANCED).*

*Sub-output 5.4: Awareness—National*

Activity 5.4.1 Awareness raising activities aimed at disseminating experiences and lessons of site components

**Output 6: Strengthened institutional and human capacities to conserve and sustainably manage biological diversity in peat swamp forests and associated wetland ecosystems**

*Sub-output 6.1—LBNP*

Activity 6.1.1 Conduct training needs analysis.

Activity 6.1.2 Design and implement workshops and training programmes for all levels of Government participants, from decision-makers to forest rangers and front-liners.

*Sub-output 6.2—Klias*

Activity 6.2.1 Conduct training needs analysis, to benchmark current planning skills and technical capacity.

Activity 6.2.2 Design and implement workshops and training courses, e.g. in the preparation and use of biodiversity overlays and community involvement techniques in local planning.

*Sub-output 6.3—Pahang*

## SECTION E: INPUTS

Project inputs are divided into five major categories;

1. National Inputs – Associated Projects
2. National Inputs – Co-Financing
3. Government In-Kind Contributions
4. Non-GEF International Financing
5. UNDP-GEF Funding

Baseline financing (National Inputs- Associated Projects) have been detailed in the incremental cost analysis provided in the Project Brief. The remaining categories of financing are described below, and total inputs in each category, by component, are summarised in the following table:

	<b>National Co-financing</b>	<b>Government in-kind contributions</b>	<b>Non-GEF International Financing</b>	<b>UNDP-GEF Funding</b>	<b>Total by Component</b>
Sarawak	3.410	1.215	0.830	1.419	7.074
Sabah	0.200	1.122	1.000	1.226	4.043
Pahang	0.880	0.807	0.600	1.106	3.393
National	0.790	1.085	0.000	1.622	2.412
<b>Total</b>	<b>5.280</b>	<b>4.229</b>	<b>2.430</b>	<b>5.373</b>	<b>16.922</b>

Note: UNDP-GEF funding excludes indirect costs & overheads, e.g. duty travel, reporting costs, monitoring & evaluation costs, etc. All figures are in million USD unless stated otherwise. Exchange rate USD1.00=RM3.80

### E.1 NATIONAL INPUTS – ASSOCIATED PROJECTS

Total associated, i.e., baseline financing for this project is estimated at \$15.13 million.

### E.2 NATIONAL INPUTS – CO-FINANCING

Government co-financing has been developed and will be implemented in close coordination with the UNDP/GEF project. This financing has been tailored to meet various objectives, which directly underlie those of the UNDP/GEF support.

Total Malaysian Government co-financing available for the project is RM 19.68 million, or US\$ 5.18 million. The co-financing comes in several distinct components, some of which represent parallel, self-standing projects. Each is described briefly below:

The total project budget is RM 12.0 million, or US\$3.16 million. The following specific inputs will be provided:

1. Main Administrative Building
2. Guest/ visitor Chalet and Hostel
3. Staff Quarters and Barracks
4. Boat House
5. Plank Walks and Jungle Trails
6. Day Shelter
7. Jetty
8. Electricity, water and sewerage services and other infrastructure
9. Main access road of 5.875 km

#### **E.2.2 Government Financial Support for Sustainable Use and Alternative Livelihood Development at the Three Project Sites**

Government financing will be provided to deal with the key issues of ensuring sustainable use and alternative livelihoods for individuals who may be affected by project activities. Total financing available for this purpose amounts to RM 4.69 million, or US\$1.23 million. This figure is broken down by state and by theme, in the following table:

Nature of Support State/Component	Government in-kind contributions for DANCED/ Netherlands projects (See E.3 below)	Government-funded PSF sustainable use activities. (In cash)	Socio-economic development and alternative livelihood support (In cash and kind)	TOTAL
Pahang	80,000	800,000	150,000	880,000
Sabah	100,000	NA	100,000	200,000
Sarawak	100,000	NA	150,000	250,000
<b>TOTAL</b>	<b>280,000</b>	<b>800,000</b>	<b>250,000</b>	<b>1,330,000</b>

The Government contributions for the DANCED and Netherlands projects represent estimates of in-kind inputs which the Federal and State Governments are providing to support PSF conservation work being undertaken under bilateral funding arrangements. (See Section E.3 below) The Government-funded sustainable use activities in Pahang come under a project currently being developed for the 8<sup>th</sup> Malaysia Plan, for capacity-building in sustainable use and sustainable forestry management practices in Pahang and Peninsular Malaysia

- 1) To examine and revise appropriate management (harvesting) regimes, taking into consideration ecological characteristics of peat swamp forest.
- 2) To determine appropriate buffers between canals and rivers for maintaining hydrological regimes in peat swamp forests.
- 3) To assess the impact of harvesting on biodiversity, both in primary and second growth peat swamp forests in Peninsular Malaysia.

The sites for this project are South-East Pahang PSF and southwest Johor. The main outputs of the project will be: (1) optimum management regimes for PSF developed by December 2002; (2) guidelines for constructing canals with appropriate buffer zones by December 2000, and; (3) guidelines on biodiversity conservation in production PSF by December 2000.

The total budget for this project will be RM 3 million, or US\$0.79 million.

### E.3 Government in-kind Contributions

Government in-kind inputs to the Project are summarised below, according to state:

#### Sarawak

##### 1. In-Kind Contribution from Project Site (Miri)

Inputs	Salary per person-month	Person-months per annum	Person-months for project duration	Total in-kind contribution
a. National Park Officer, Miri	5,000	3	15	75,000
b. 15 rangers/support staff including subsistence allowance	1,500	60	300	450,000
c. 3 administrative staff	1,000	9	45	45,000
d. Office space (2,000 per month)		12	60	120,000
e. Furniture (one time cost)				25,000
f. Transport (2 vehicles at RM 2,500 per month, including maintenance and petrol)		12	60	300,000
<b>Sub-total</b>				<b>1,015,000</b>

##### 2. Other in-kind Contribution from Sarawak State

a. Wildlife Department Officer	5,000	2	10	50,000
b. State Planning Unit Officer	5,000	2	10	50,000
c. Other State Government officials	5,000	2	10	50,000
d. Internal staff travel related to project for 5 years project duration				50,000
<b>Sub-total</b>				<b>200,000</b>
<b>TOTAL SARAWAK CONTRIBUTION</b>				<b>1 215 000</b>

**Sabah**

Inputs	Persons	Rate	Months per annum	Over 5 years	Total in-kind contribution
<b>Site-Specific Contributions</b>					
Regional Forest Officer, Kimanis	1	5,000	1		25,000
Project Liaison Officer	1	3,000	6	€	90,000
Forest Rangers	3	2,250	4	€	135,000
Foresters	9	1,500	4	€	270,000
Drivers	3	900	4	€	54,000
Admin & Support staff	3	900	3	1	40,500
Space		2,000	12	€	120,000
Vehicle	2	5,000	3	1	150,000
Boat (per year)		4,000			20,000
Total					904,500

<b>State-Level Contributions</b>					
State Coordinator	1	5,000	1		25,000
State EPU	1	5,000	1		25,000
Other State Officers	1	5,000	1		25,000
Internal Staff Travel (trips per year)		700	12	€	42,000
Total					292,000
Communications (per year)		10,000			50,000
Deprecation & Consumables (per year)		10,000			50,000
<b>TOTAL SABAH IN-KIND CONTRIBUTION</b>					<b>1,121,500</b>

**Pahang**

Inputs	Persons	Rate	Months per annum	Over 5 years	Total in-kind contribution
<b>Site-Specific Contributions</b>					
District Forest Officer, Kuantan	1	5,000	3	1	45,000
Forest Ranger (G3)	2	2,030	6	€	121,800
Administrative Assistant (N9)	1	1,000	12	€	60,000
Driver (R9)	1	800	12	€	48,000
Fieldwork Expenses, Per Diems, etc.					
Forest Ranger (G3) (per year)		5,500			27,500
Drivers		2,200			11,000
Field Staff (Forestry, Fisheries, Wildlife, Orang Asli & Drainage and Irrigation Departments)		42,000			210,000
Utilities (Telephone, electricity, water, etc.)		3,600			18,000
Equipment leasing (photocopier)		2,000			10,000



State-Level Contributions				
State Coordinator	1	5,000	1	25,000
State EPU	1	5,000	1	25,000
Other State Officers	1	5,000	2	1 50,000
Internal Staff Travel (trips per year)		700	12	€ 42,000
Total				142,000
<b>TOTAL PAHANG IN-KIND CONTRIBUTION</b>				<b>966,900</b>

### Federal Government

National Steering Committee (expenses for attendance at meetings, travel & per diems, etc)

Agency	Rate per year	Total
Ministry of Primary Industries (2 persons)	10,000	50,000
Sabah State Government	5,000	25,000
Sarawak State Government	5,000	25,000
Pahang State Government	5,000	25,000
Economic Planning Unit	5,000	25,000
Forestry Department (2 persons)	10,000	50,000
Ministry of Science, Technology and Environment	5,000	25,000
Drainage and Irrigation Department	5,000	25,000
Ministry of Agriculture	5,000	25,000
<b>Total</b>		<b>275,000</b>

### Executing Agency (Regional Centre for Forest Management)

Input	Persons	Rate (USD)	Months per annum	Total
Director	1	7,000	2	70,000
Senior Officer	2	5,000	3	150,000
Officers	2	3,000	3	90,000
Assistant Officers	2	2,000	4	80,000
Administrative Officer	1	1,500	4	30,000
Admin. Assistant	2	1,500	3	45,000
Driver	1	800	3	12,000
Total Staff				477,000
Office Space		3,000	12	180,000
Vehicle		1,900	6	57,000
Trips		3,250		39,000
Communications		5,700		28,500

#### **E.4.1 DANCED Peat Swamp Forest Management Project in Sabah and Pahang**

Danish Cooperation for Environment and Development (DANCED) will support a project valued at approximately US\$1.6 million. The project, which is currently being formulated in co-operation with the Malaysian Government, is scheduled to be implemented from 2000-20002 and will represent a key source of complementary support at the project sites in Pahang and Sabah.

Each of these sites, as discussed above, is threatened to various degrees by actual and planned activities taking place either within the forests themselves and /or within adjacent areas. In the case of Pahang, such activities include planned logging within the forest reserves as well as peatland conversion and drainage in areas surrounding the reserves. At Klias, a mixture of current threats and planned developments at the Peninsula threaten the sustainability of remaining PSF areas. The primary objective of the project will therefore be to ensure that economic activities in and around PSFs are sustainable and are carried out in such a way that the long-term values and particularly the hydrological integrity, of peat swamps forests may be conserved.

The project will build on DANCED's and the Government's ongoing experience in formulating strategies for sustainable use of PSF areas (see section A.5 above). Specific outputs, which are currently being finalised, include the following:

- *Sabah (Total project budget US\$1.0 million):*
  - ❖ a detailed hydrological assessment of PSF and hydrologically connected areas
  - ❖ information developed on current and planned land uses
  - ❖ information on demographic and socio-economic aspects
  - ❖ water management strategies developed for protected areas and other peatland areas
  - ❖ pilot activities in forest rehabilitation and enrichment planting in degraded peat areas
  - ❖ *(together with GEF)* biodiversity conservation master plan for Klias Peninsula
  - ❖ small-scale hydrological solutions (e.g. closing drains, inexpensive wooden weirs) in critical locations neighbouring Klias FR.
- *Pahang (Total project budget US\$600,000):*
  - ❖ a hydrological assessment, including a survey of current and projected water needs, and an assessment of threats to PSF related to water use by nearby oil palm and aquacultural developments
  - ❖ a timber resource assessment
  - ❖ a forestry action plan, including a strategy for logging operations which have minimum impact on core protection areas and are adaptable to different PSF habitats, as well as silvicultural and rehabilitation plans
  - ❖ *(together with GEF)* an integrated management plan for PFE Reserves, incorporating local community resource (e.g. water) use requirements and strategies to mitigate threats from surrounding land use practices

#### E.4.2 The Netherlands Collaborating Agency and Sarawak Forestry Department – Sustainable Management of Peat Swamp Forest of Sarawak with special reference to Ramin (*Gonystylus Bancanus*)

This project will help to formulate a strategic management plan for the remaining PSF in Sarawak, including silvicultural techniques for its continuous conservation and utilisation. Special emphasis will be on the regeneration, growth and conservation of Ramin. The specific output of the project, as detailed in the project document, is to generate “more sound, reliable, timely and precise” information about PSF resources, and to use this information to develop a better system to monitor change, to plan and make decisions for implementing effective, sound forest management and conservation programmes.

The total budget for this project is estimated at US\$ 830,000.00.

#### E.5 UNDP-GEF FUNDING

GEF will provide US\$5.985 million for the project. Of this total, USD\$1.368 million is being allocated for the recruitment of international personnel (see E.5.1 below).

##### E.5.1 Personnel

Table E.5.1: Personnel expenses				
Component	Corresponding activities	Description of inputs	W/M	Total cost (US\$)
11. International experts/consultants				
1 Sarawak	111,113,212	PSF Ecologist	4	48,000
	112	PSF and floodplain hydrologist	4	48,000
	215	Protected area management planning	6.5	78,000
	Various	Other short-term international consultants	4	40,000
2 Sabah	121,222	PSF Ecologist	6	72,000
	221,222	Integrated management planning specialist	5	60,000
	Various	Other short-term international consultants	2.5	25,000
3 Pahang	131,232	PSF Ecologist	5	60,000
	231,235	Management planning	5.5	66,000
	Various	Other international consultants	2.5	25,000
4 National	Various	Chief Technical Advisor	60	600,000
		Misc. international consultants	6.5	65,000
Sub-totals			122.5	1,187,000
13. Administrative support personnel				
4 National	Various	Administrative and finance assistant	60	72,000
		Editorial assistant	60	72,000

17. National experts / consultants				
1 Sarawak	Various	National expert: protected area management	60	177,000
	111,113,211	Ecologist/biologist	12	66,000
	215	PSF/Protected area management	17	93,500
	114,213,214	Socio-economist / participatory specialist	9	49,500
	Various	Other national consultants	25	125,000
2 Sabah	Various	National expert: integrated land-use planning	60	177,000
	122,222	PSF ecology/management	16	88,000
	124,125,225	Socio-economist / participatory specialist	5	27,500
	Various	Other national consultants	25	125,000
3 Pahang	Various	National expert: sustainable forestry	60	177,000
	233	PSF Ecology/management	25	137,500
	134,135,235	Socio-economist / participatory specialist	4	22,000
	Various	Short-term national consultants	16	80,000
4 National		Training specialist	11	55,000
	Various	Misc. national consultants	12	60,000
<i>Sub-total</i>			345	1,460,000
<b>Total Personnel Component</b>			<b>642</b>	<b>3,913,800</b>

## E.5.2 Sub-contracts

Table E.5.2: Sub-contracts			
Compo- nent	Correspond- ing activities	Description of inputs	Total cost (US\$)
21. Sub-contracts			
1 Sarawak	314	Develop park interpretation	45,000
	315	Develop / implement participation plan	45,000
	511	Develop / implement awareness campaign	50,000
	312	Sub-contracts	50,000
2 Sabah	223	Biodiversity overlays	140,000
	521	Develop / implement awareness campaign	55,000
3 Pahang	232	Biodiversity overlays	130,000
	531	Develop / implement awareness campaign	45,000
	Various	Sub-contracts	50,000
4 National		Develop / implement national awareness campaign	140,000
	Various	Sub-contracts	50,000
<i>Sub-total</i>			800,000
<b>Total Sub-contracts component</b>			<b>800,000</b>

## E.5.3 Training

Table E.5.3: Training

4 National	641	Workshops and seminars	75,000
<i>Sub-total</i>			215,000
<b>33. In-service training</b>			
1 Sarawak	612	Misc. in-service training	60,000
2 Sabah	622	Misc. in-service training	56,000
3 Pahang	632	Misc. in-service training	28,000
4 National		Short-term training course on PSF management	150,000
			294,000
<b>Total training component</b>			<b>509,000</b>

#### E.5.4 Equipment and Supplies

<b>Table E.5.4: Equipment and supplies</b>		
Component	Description of inputs	Total cost (US\$)
<i>45.01 Local procurement</i>		
1 Sarawak	<b>Local procurement</b> * 4 Boats * Vehicle * Office & Computer equipment * Field equipment (GPS, Range finder, etc)	<b>150,000</b> 20,000 50,000 15,000 65,000
2 Sabah	<b>Local procurement</b> * 3 Boats * Vehicle * Office & Computer equipment * Field survey equipment	<b>120,000</b> 15,000 50,000 15,000 40,000
3 Pahang	<b>Local procurement</b> * 2 Boats * Vehicle * Office equipment * Field equipment	<b>85,000</b> 10,000 50,000 10,000 15,000
4 National	<b>Local procurement</b> * Office & Computer equipment * Audio-visual & training equipment	<b>50,000</b> 20,000 30,000
	<b>Operations and maintenance</b>	<b>100,000</b>
<b>Total Equipment and supplies component</b>		<b>505,000</b>

<b>Output</b>	<b>Sarawak</b>	<b>Sabah</b>	<b>Pahang</b>		
Output 1: Information / Analysis	\$230,000	\$110,000	\$220,000	\$100,000	<b>\$660,000</b>
Output 2: Management plans	\$155,000	\$320,000	\$160,000	NA	<b>\$635,000</b>
Output 3: Demonstration / Implementation	\$600,000	\$325,000	\$300,000	NA	<b>\$1,225,000</b>
Output 4: Inter-sectoral Coordination	\$30,000	\$100,000	\$50,000	NA	<b>\$180,000</b>
Output 5: Awareness	\$150,000	\$60,000	\$75,000	\$350,000	<b>\$635,000</b>
Output 6: Capacity building	\$110,000	\$70,000	\$120,000	\$350,000	<b>\$650,000</b>
<b>Component total</b>	<b>\$1,275,000</b>	<b>\$985,000</b>	<b>\$925,000</b>	<b>\$800,000</b>	<b>\$3,985,000</b>
Staff Salaries	NA	NA	NA	\$1,329,000	<b>\$1,329,000</b>
PSU operations, monitoring and evaluation, Agency support, reporting and other overheads.	NA	NA	NA	\$671,000	<b>\$671,000</b>
<b>Total</b>	<b>\$1,275,000</b>	<b>\$985,000</b>	<b>\$925,000</b>	<b>\$2,800,000</b>	<b>\$5,985,000</b>

A substantial portion of the total budget will be spent on personnel costs and overheads, including costs associated with the Project CTA, support staff and State Experts to be engaged for each of the three State components. Since these Experts will be contracted under the PSU their personnel costs are shown under the National component, although their actual input will take place largely at state component level.

Similarly activities relating to Agency (UNDP) support, monitoring and evaluation, project reporting etc. are also categorised under the PSU (and thus included in the National component) even though they relate to state components also. Thus the budget allocation totals shown by output above, which only reflect direct expenditure on each component, do not fully reflect the amount of funds that will be spent to undertake activities at each state.

A detailed budget in standard UNDP format is given as Appendix 1.

## SECTION F: RISKS

The anticipated risks and the mitigation measures to deal with the potential risks for this project are as follows:

- ◆ *The indispensability of full government support* - This project will not achieve the results predicted unless the Government of Malaysia, and specifically the Regional Centre for Forest Management, and the three participating states, and other relevant stakeholders fully support both the goals of the project as well as the day-to-day implementation and administration of the project. The commitment of the federal and state governments is indicated both through their development of wetlands and biodiversity strategies, and through a significant financial commitment to co-financed activities, even in a time of economic crisis. Other stakeholders have been consulted in the process of formulating the project brief, and will continue to be closely involved in decision-making and project activities. To ensure full support from the government, the project design incorporates the creation of a National Steering Committee (NSC) with representation from the affected ministries and other relevant parties on the committee. Reducing the risk of lack of support has also been engineered into the design of each program within the overall project, by including key stakeholders at each level in the program design and implementation, thus hopefully engendering their full support.
- ◆ *The inter-relatedness of some of the outputs* - Another risk associated with the project involves the inter-relatedness of some of the outputs. For example, output 2, which involves the preparation of management plans, depends on the completion of databases and information gathering processes being conducted under output 1. Thus timely, phased completion of tasks will be important.
- ◆ *The increase pressure for short-term commercial gains* - A third risk is that macro-level factors, e.g., continuing economic difficulties, could increase pressure for short-term commercial gains from PSFs rather than long-term and partially non-commercial ones. This would not be expected to affect project sites significantly, but rather to limit the potential for widespread impacts through a demonstration effect. Awareness efforts will be an important element in guarding against this eventuality.
- ◆ *The need to meet targets in site component* - A fourth risk is that the structure of the project which consists of three separate site components (and one national component) running concurrently, creates a risk that delays or failure to meet targets in one site component will hamper progress in the other components. Severe slippage in one component could hinder the disbursement of funds, for instance, thereby resulting in other components slowing down or missing targets. In this sense the various components are inter-dependent, and difficulties at one site may cause other components to be delayed also. It is therefore necessary to emphasise close coordination and mutual reinforcement between site components, to reinforce the fact that this is one unified project and not a collection of independent programmes.
- ◆ *The need for improved coordination* - The fifth risk is the lack of overall coordination could result in key

these are delays in hiring the key personnel (e.g., CTA) who will work on the project, poor coordination resulting to slow progress, and poorly scheduled critical events. These procedural risks have been addressed both by the creation of the NSC and the appointment of an NPD. In fact, these are among the pre-requisites of the project. Since the availability of the CTA is very critical in the smooth running of the project, the Regional Centre for Forest Management would have to scout for the appropriate candidates for the position, months ahead of the target project kick-off.

## **SECTION G: PRIOR OBLIGATIONS AND PREREQUISITES**

The prior obligations for work to commence on this project are as follows:

- Approval of the Project Document by the Malaysian Government (Ministry of Primary Industries) and a written commitment to provide the resources (financial and in-kind) stated herein as Government co-financing.

The project document will be signed by UNDP and UNDP assistance to the project will be provided only if the prior obligations stipulated above have been met to UNDP's satisfaction.

Prerequisites for successful implementation of the project's activities are as follows:

- Endorsement of the Project Document by the State Governments of Sabah, Pahang and Sarawak, undertaking to fulfil all responsibilities and provide all forms of support and assistance laid out in the Project Document.
- Confirmation from the Federal Treasury/EPU that funding for Government co-financed activities in the later stages of the project will be included in the Eighth Malaysia Plan (2001-2005).
- Ensure that in-kind inputs specified in the project document, such as staff and necessary support services for the execution of the project are made available at the Federal, and State levels; a review of staff inputs into the project will be made via the regular project progress report
- Availability of the space, furniture and staff for the PSU and state/site coordinators, at the agreed locations.
- Commitment of other government agencies to support the program where necessary, particularly by agencies such as the DOE and District Offices.

The project document will be signed by UNDP, and UNDP assistance to the project will be provided, subject to UNDP being satisfied that the pre-requisites listed above have been fulfilled or are likely to be fulfilled.



## **SECTION H: PROJECT REVIEWS, REPORTING AND EVALUATION**

Ongoing project monitoring will be provided in accordance with established UNDP procedures and will be provided by the UNDP Malaysia County Office with support from UNDP/RBAP/GEF. Overall supervision of the Project will be the responsibility of the PSC, which will meet at least once every twelve months. The National project director will call meetings of the NSC.

### **H 1. Reporting**

The Project support Unit will be responsible for the preparation and submission of the following reports:

**(a) *Inception Report (IR)***

The inception report is to be prepared by the Project CTA with the assistance of the State Experts. The IR will be prepared no later than three months after project start-up and will include a detailed Workplan and Budget for the duration of the project, progress to date on project establishment and start-up activities and any proposed amendments to project activities or approaches. The report will be presented to the Chair of the NSC for circulation to all NSC members, who will be given a period of one calendar month in which to respond with comments or queries. The report will also be reviewed by UNDP Malaysia and UNDP-GEF to ensure consistency with the objectives and activities indicated in the Project Document.

**(b) *Annual Programme/Project Report (APR)***

The Annual Project Report (APR) is designed to obtain the independent views of the main stakeholders of a project on its relevance, performance and the likelihood of its success. The APR aims to: a) provide a rating and textual assessment of the progress of a project in achieving its objectives; b) present stakeholders' insights into issues affecting the implementation of a project and their proposals for addressing those issues; and c) serve as a source of inputs to the Tripartite Review (TPR). The main project stakeholders participate in the preparation of the APR.

The APRs will be prepared every six months during the first year of the project, and then annually. The NSC may, at its discretion, require that APRs be presented at six-monthly intervals for the entire duration of the project. The APRs will detail activities undertaken since the last APR, milestones reached, key results and achievements, problems encountered and any other issues that need to be conveyed to NSC. State coordinators will be required to prepare site/component APRs which will be delivered to the Project CTA no later than three weeks prior to submission of each APR; these site reports will form an integral part of the APR as presented by CTA.

**(c) *Periodic Status Reports***

Technical Reports are detailed documents covering specific areas of analysis or scientific specialisations within the overall project, e.g. hydrology, flora, fauna, stakeholders and socio-economics, soils, pollution, etc. As part of the Inception Report the Project CTA will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants as Final Reports for their technical inputs, and should be comprehensive, specialised analyses of clearly-defined areas of research within the framework of the project and its sites.

**(e) *Project Publications***

Project Publications will form a key method of crystallising and disseminating the results and achievements of the Project. These publications will be scientific or informational texts on the activities and achievements of the Project, in the form of books, journal articles or multimedia publications. These Publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The Project CTA will determine if specific Technical Reports merit formal publication, and will also (in consultation with the State Coordinators and with the help of external specialists and staff where necessary) plan and produce these Publications in a consistent and recognisable format and identity. These Publications will form the most visible public output of the Project, and as such should be prepared and presented to the highest scientific and technical standards.

**(f) *Project Terminal Report***

During the last three months of the project the Project CTA will (with the assistance of State Coordinators and other staff) prepare the Project Terminal Report. This comprehensive report will summarise all activities, achievements and outputs of the Project, lessons learnt, objectives met and missed, structures and systems implemented, etc. and will be the definitive statement of the Project's activities over the five-year duration. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

**(g) *Other Publications and Publicity Activities***

In order to ensure international dissemination of project results, ***a high-quality publication of results*** will be prepared, based upon the Project Terminal Report and previous Project Publications. Finally, it will be useful to hold at least one *international workshop* at which policy makers in neighbouring countries can be made aware of Malaysia's progress in achieving sustainable PSF management.

shall prepare an Annual Project Report (APR) and to submit to UNDP. The APR must be ready two weeks prior to the TPR.

The APR will be used as one of the basic documents for discussions in the TPR meeting. The National Project Director/CTA presents the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The NPD/CTA also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Six-monthly APR's will be provided during the first two years of the project to ensure that design and inception activities are closely monitored, and subsequently the APR will be done on an annual basis. Separate reviews of each state component may also be conducted if required by the NSC. Monitoring and Evaluation Indicators will be built into the project in consultation with UNDP.

### ***Terminal Tripartite Review (TTR)***

The terminal tripartite review is held in the last month of project operations. The Project support Unit is responsible in preparing the Terminal Report, and to submit to UNDP. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by the executing agency at least two months prior to the terminal tripartite review. The Terminal Report will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its immediate objectives and contributed to the broader environmental objective, and decides whether any actions are still necessary.

### ***Project Implementation Review (PIR)***

A major tool for monitoring the GEF portfolio and extracting lessons is the annual GEF Project Implementation Review (PIR). The PIR has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects.

The PIR is mandatory for all GEF projects that have been under implementation for at least one year at the time that the exercise is conducted. A project becomes legal and implementation activities can begin when all parties have signed the project document. The PIR questionnaire is sent to the UNDP country office, usually around the beginning of June. It is the responsibility of the Project CTA to complete the PIR questionnaire, with the oversight of the UNDP Country Office.

### ***Mid-term Evaluation***

An independent Mid-Term Evaluation will be undertaken at the end of the second year. The Mid-Term Evaluation will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced

for follow-up activities. The organisation, terms of reference and timing of the final evaluation will be decided after consultation between the parties to the project document.

### ***Regular Monitoring and Evaluation***

The project will also be closely monitored by the UNDP Country Office through quarterly meetings or more frequently as deemed necessary with the National project Director, and the Project support Unit. This will allow to take stock and to trouble shoot of any problems pertaining to the project quickly to ensure smooth implementation of project activities.

## **SECTION I: LEGAL CONTEXT**

This project document shall be the instrument envisaged in the Supplemental Provisions to the Project Document, attached hereto. The host-country implementing agency shall for the purpose of the Supplemental Provisions to the Project Document, refer to the Government co-operating agency described in the Supplemental Provisions.

All activities stipulated in the Project Document shall be implemented accordingly. However, should there be a need to make changes/modifications to any of the agreed activities, all signatories of the Project Document must concur, before such changes are made.

The following amendments may be made to the original Project Document, even if they are signed only by the UNDP Resident Representative, provided the latter assumes that all other signatories of the Project Document have no objections to the amendments:

- Revisions in, or additions to, any of the Annexes of the Project Document with the exception of the Standard Legal Text for non-SBAA countries which may not be altered and the agreement to which is a precondition for UNDP assistance.
- Revisions which do not result in a major changes in the project's immediate objectives or outputs, and which are attributable to a reordering of the activities or inputs in order to improve the realisation of the objectives or the outputs.
- Necessary yearly revisions which are made to reorganise the provision of already scheduled inputs, to reflect an increase in the cost of expert services or other services due to inflation.

The government executing agent designated on the cover page to this project document has been duly delegated by the government coordinating authority to carry out this project and accordingly will follow the NEX accounting, financial reporting and auditing procedures set forth in the following documents as may be amended by UNDP from time to time.

procedures for nationally executed projects, pursuant to the Government's overall national execution responsibilities under the Project Document and as set out in the documents listed above.

In addition, all accounts maintained by the government for UNDP resources may be audited by the UNDP internal Auditors and/or the United Nations Board of Auditors or by public accountants designated by the United Nations Board of Auditors.

## **ANNEXES:**

**Annex 1: Project Budget**

**Annex 2: Terms of Reference**

**Annex 3: Project Workplan**

**Annex 4: Stakeholder Participation Report**

**Annex 5: Project Brief Incremental Cost Analysis**

**Annex 6: Project Brief Logical Framework Analysis**

BL	Description	Corresponding activities	W/m	APPR. TOTAL	2000	2001	2002	2003	2004
<b>11.00</b>	<b>International Experts &amp; Consultants</b>								
11.01	Chief Technical Advisor		60	600,000	120,000	120,000	120,000	120,000	120,000
	<b>Sarawak Component</b>								
11.02	PSF Ecologist	111/113/212	4	48,000	24,000	18,000	6,000		
11.03	PSF & Floodplain hydrology	112	5	60,000	30,000	30,000			
11.04	Protected Area Mgt Planning	215	6.5	78,000	30,000	30,000	18,000		
11.05	Other Consultants	Various	3.5	35,000	15,000	10,000	5,000	5,000	
	<b>Sabah Component</b>								
11.06	PSF Ecologist	121,222	6	72,000	36,000	24,000	12,000		
11.07	Management Planning	221,222	5	60,000	30,000	24,000	6,000		
11.08	Other Consultants	Various	2.5	25,000	10,000	15,000			
	<b>Pahang Component</b>								
11.09	PSF Ecologist	131,232	5	60,000	36,000		24,000		
11.10	Management Planning	231,235	5.5	66,000	24,000	30,000	12,000		
11.11	Other Consultants	Various	2.5	25,000	15,000	10,000			
	<b>National/PSU Component</b>								
11.12	Other Consultants	Various	6.5	65,000	15,000	15,000	15,000	20,000	
11.99	<b>Component Total</b>			<b>1,194,000</b>	<b>385,000</b>	<b>326,000</b>	<b>218,000</b>	<b>145,000</b>	<b>120,000</b>
<b>13.00</b>	<b>Admin. Support Personnel</b>								
	<b>National/PSU Component</b>								
13.01	Admin./ Finance Asst.	Various	60	72,000	14,400	14,400	14,400	14,400	14,400
13.02	Editorial Asst..	Various	60	72,000	14,400	14,400	14,400	14,400	14,400
13.03	Secretary/ Receptionist	Various	60	54,000	10,800	10,800	10,800	10,800	10,800
<b>13.99</b>	<b>Component Total</b>			<b>198,000</b>	<b>39,600</b>	<b>39,600</b>	<b>39,600</b>	<b>39,600</b>	<b>39,600</b>

<b>15</b>	<b>Duty Travel</b>								
15.01	Local Travel (UNDP Personnel)	Various		65,000	15,000	10,000	15,000	10,000	15,000
<b>15.99</b>	<b>Component Total</b>			<b>65,000</b>	<b>15,000</b>	<b>10,000</b>	<b>15,000</b>	<b>10,000</b>	<b>15,000</b>
<b>16.00</b>	<b>Mission Costs</b>								
16.01	Mission costs: Sarawak	Various		300,800	99,950	85,500	50,800	35,950	24,200
16.02	Mission costs: Sabah	Various		242,350	78,350	62,550	38,650	37,300	21,500
16.03	Mission Costs: Pahang	Various		211,600	73,350	52,150	37,700	29,600	18,800
16.04	Mission Costs: National/PSU Component	Various		144,650	38,650	30,550	30,550	26,500	18,400
16.05	GEF Coordinator			24,000	6,000	6,000	6,000	6,000	
16.06	Midterm Monitoring & Evaluation (2 pple)			38,000			38,000		
16.07	Mandatory Evaluation			38,000					38,000
<b>16.99</b>	<b>Component Total</b>			<b>999,400</b>	<b>296,300</b>	<b>236,750</b>	<b>201,700</b>	<b>135,350</b>	<b>120,900</b>
<b>17.00</b>	<b>National Professionals</b>								
	<b>Sarawak Component</b>								
17.01	Ecologist/Biologist	111/113/211	12	66,000	33,000	22,000	11,000		
17.02	PSF/Protected Area Mgt	215	17	93,500	27,500	24,750	19,250	16,500	5,500
17.03	Socio Economist/Participatory Specialist	114/213/214	9	49,500	22,000	22,000	5,500		
17.04	Other Consultants	Various	25	125,000	25,000	25,000	25,000	25,000	25,000
	<b>Sabah Component</b>								
17.05	PSF Ecology/Mgt	122,222	16	88,000	33,000	22,000	11,000	22,000	
17.06	Socio economist/participatory specialist	124,125,225	6	33,000	16,500	11,000	5,500		
17.07	Other Consultants	Various	25	125,000	25,000	25,000	25,000	25,000	25,000
	<b>Pahang Component</b>								
17.08	PSF Ecology/Mgt	233	25	137,500	44,000	27,500	22,000	22,000	22,000
17.09	Socio economist/participatory specialist	134,135,235	4	22,000	5,500	11,000	5,500		
17.10	Other Consultants	Various	16	80,000	25,000	20,000	15,000	20,000	
	<b>National /PSU Component</b>								
17.11	Expert for Sarawak	Various	60	177,000	35,400	35,400	35,400	35,400	35,400
17.12	Expert for Sabah	Various	60	177,000	35,400	35,400	35,400	35,400	35,400
17.13	Expert for Pahang	Various	60	177,000	35,400	35,400	35,400	35,400	35,400
17.14	Training specialist	641	11	55,000	25,000	10,000	15,000	5,000	
17.15	Other Consultants	Various	12	60,000	15,000	15,000	10,000	10,000	10,000
<b>17.99</b>	<b>Component Total</b>			<b>1,465,500</b>	<b>402,700</b>	<b>341,450</b>	<b>275,950</b>	<b>251,700</b>	<b>193,700</b>
<b>19.00</b>	<b>Total</b>			<b>3,921,900</b>	<b>1,138,600</b>	<b>953,800</b>	<b>750,250</b>	<b>581,650</b>	<b>489,200</b>



<b>21.00</b>	<b>Subcontract A (Sarawak Component)</b>								
21.01	Develop Park Interpretation	314		45,000	10,000	12,500	15,000	7,500	
21.02	Develop/Implement participation plan	315		45,000	20,000	20,000	5,000		
21.03	Develop/Implement awareness campaign	511		50,000	15,000	15,000	15,000	5,000	
21.04	Other Subcontracts	312		50,000	15,000	17,500	17,500		
<b>21.99</b>	<b>Total</b>			<b>190,000</b>	<b>60,000</b>	<b>65,000</b>	<b>52,500</b>	<b>12,500</b>	
<b>22.00</b>	<b>Subcontract B (Sabah Component)</b>								
22.01	Biodiversity Overlays	223		140,000			70,000	70,000	
22.02	Develop/Implement awareness campaign	521		55,000	17,500	17,500	15,000	5,000	
<b>22.99</b>	<b>Total</b>			<b>195,000</b>	<b>17,500</b>	<b>17,500</b>	<b>85,000</b>	<b>75,000</b>	
<b>23.00</b>	<b>Subcontract C (Pahang Component)</b>								
23.01	Biodiversity Overlays	232		130,000			65,000	65,000	
23.02	Develop/ Implement awareness campaign	531		45,000	12,500	17,500	10,000	5,000	
23.03	Other Subcontracts	Various		50,000	15,000	17,500	17,500		
<b>23.99</b>	<b>Total</b>			<b>225,000</b>	<b>27,500</b>	<b>35,000</b>	<b>92,500</b>	<b>70,000</b>	
<b>24.00</b>	<b>Subcontract D (National Component/PSU)</b>								
24.01	Design & implement awareness campaign	541		140,000	36,000	32,000	30,000	24,000	18,000
24.02	Other Subcontracts	Various		50,000	20,000	15,000	15,000		
<b>24.99</b>	<b>Total</b>			<b>190,000</b>	<b>56,000</b>	<b>47,000</b>	<b>45,000</b>	<b>24,000</b>	<b>18,000</b>
<b>29.00</b>	<b>Subcontracts Total</b>			<b>800,000</b>	<b>161,000</b>	<b>164,500</b>	<b>275,000</b>	<b>181,500</b>	<b>18,000</b>
<b>32.00</b>	<b>Group Training</b>								
32.01	In Service Training:Sarawak	612		59,000	12,500	15,000	12,500	10,000	9,000
32.02	In Service Training:Sabah	622		56,000	12,000	12,000	10,000	12,000	10,000
32.03	In Service Training:Pahang	632		28,000	8,000	8,000	6,000	6,000	
32.04	Short Term PSF Mgt Training(National/PSU)	641		145,000	30,000	32,500	35,000	22,500	25,000
<b>32.99</b>	<b>Component Total</b>			<b>288,000</b>	<b>62,500</b>	<b>67,500</b>	<b>63,500</b>	<b>50,500</b>	<b>44,000</b>
<b>33</b>	<b>Workshops</b>								
33.01	Workshop & Seminar: Sarawak	612		50,000	12,000	8,500	9,000	8,500	12,000
33.02	Workshop & Seminar: Sabah	421/422/622		40,000	10,000	8,000	8,000	7,000	7,000
33.03	Workshop & Seminar: Pahang	431/431/632		50,000	9,000	9,000	12,000	8,000	12,000
33.04	Workshop & Seminar (National/PSU)	431,641,541		76,000	20,000	15,000	13,500	12,500	15,000
<b>33.99</b>	<b>Component Total</b>			<b>216,000</b>	<b>51,000</b>	<b>40,500</b>	<b>42,500</b>	<b>36,000</b>	<b>46,000</b>
<b>39.00</b>	<b>Total</b>			<b>504,000</b>	<b>113,500</b>	<b>108,000</b>	<b>106,000</b>	<b>86,500</b>	<b>90,000</b>

<b>45</b>	<b>Local Procurement of Equipment</b>								
45.01	Local procurement for Sarawak	311		150,000	90,000	20,000	20,000	20,000	
45.02	Local procurement for Sabah	321		120,000	70,000	15,000	15,000	20,000	
45.03	Local procurement for Pahang	331		85,000	35,000	15,000	15,000	20,000	
45.04	Local Procurement(National/PSU)	Various		50,000	20,000	10,000	10,000	10,000	
45.05	Operating Cost (National/PSU)	Various		85,000	17,000	17,000	17,000	17,000	17,000
<b>45.99</b>	<b>Component Total</b>			<b>490,000</b>	<b>232,000</b>	<b>77,000</b>	<b>77,000</b>	<b>87,000</b>	<b>17,000</b>
<b>49.00</b>	<b>Component Total</b>			<b>490,000</b>	<b>232,000</b>	<b>77,000</b>	<b>77,000</b>	<b>87,000</b>	<b>17,000</b>
<b>52</b>	<b>Reporting Costs</b>								
52.01	Publications	Various		19,780	5,500	3,000	2,500	3,000	5,780
52.02	Auditing			15,000	3,000	3,000	3,000	3,000	3,000
<b>52.99</b>	<b>Component Total</b>			<b>34,780</b>	<b>8,500</b>	<b>6,000</b>	<b>5,500</b>	<b>6,000</b>	<b>8,780</b>
<b>53</b>	<b>Sundries</b>								
53.01	Miscellaneous : Sarawak			15,000	3,000	3,000	3,000	3,000	3,000
53.02	Miscellaneous : Sabah			15,000	3,000	3,000	3,000	3,000	3,000
53.03	Miscellaneous : Pahang			15,000	3,000	3,000	3,000	3,000	3,000
53.04	Miscellaneous : National/PSU			15,000	3,000	3,000	3,000	3,000	3,000
<b>53.99</b>	<b>Component Total</b>			<b>60,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>
<b>54</b>	<b>Project Supt Services</b>	<b>3.00%</b>		<b>174,320</b>	<b>49,968</b>	<b>39,639</b>	<b>36,773</b>	<b>28,640</b>	<b>19,049</b>
<b>59.00</b>	<b>Total</b>			<b>269,100</b>	<b>70,468</b>	<b>57,639</b>	<b>54,273</b>	<b>46,640</b>	<b>39,829</b>
	<b>Grand Total</b>			<b>5,985,000</b>	<b>1,715,568</b>	<b>1,360,939</b>	<b>1,262,523</b>	<b>983,290</b>	<b>654,029</b>

## **ANNEX 2: TERMS OF REFERENCE**

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### **Government-Appointed Positions**

1. National Project Director

The National Project Director (NPD) will be responsible for all objectives, activities and outputs of the Project. S/he will, with the assistance of the Project Chief Technical Advisor, supervise the activities of the Project Support Unit and ensure adherence to the Project and site component Work Plans that will form the basis for project execution. The NPD will serve as the primary focal point for all Project activities in Malaysia, and will also be responsible for liaison with the three State Governments and Government Ministries and Agencies involved, as well as for reporting to and liaison with UNDP/GEF. The NPD appointed by the Government of Malaysia is the Director of the Regional Centre for Forest Management

2. State Coordinators

The State Coordinators will be the State/ Site component equivalents of the National Project Director. A State Coordinator will be appointed by each State Government, i.e., Sarawak, Sabah and Pahang. S/he will preferably be from the key implementing agency in the respective state, but the final selection of State Coordinators will be the responsibility of the State Governments.

Each State Coordinator will serve as the primary focal point for all Project activities in the State's component, and will also serve as the primary liaison between the Project and all relevant State Government agencies and departments. The State Coordinators will be responsible for the supervision of the respective Site Units, and will work closely with the National Expert out-posted to their respective State component.

## **Long-Term Staff Positions (National)**

1. Chief Technical Advisor (National/ International)  
( *Detailed Terms of Reference for the Chief Technical Advisor will be prepared by the National Project Director in consultation with UNDP/GEF and endorsed by the Project Steering Committee prior to the selection and appointment of the CTA.*  
*Selection procedures will be undertaken nationally in the first instance, however in the event that candidates of the requisite caliber are not identified international selection will be undertaken. In anticipation of the latter contingency the CTA position has been budgeted at international consultant level.*)

The Chief Technical Advisor will:

- have primary responsibility for project management and implementation;
- report regularly to the National Project Director and periodically to the National Steering Committee;
- be responsible for management of all project activities and running of the Project Support Unit
- directly supervise all members of the PSC, including the National Experts out posted to the state components.
- be employed on a full-time basis for a period of 60 months.
- be based at the Project Support Unit, but will be expected to travel extensively to all three project sites as well as the Federal and State capitals for consultations with the relevant government ministries and agencies.

The following are among the key criteria by which the CTA will be selected:

- academic and technical qualifications in Forestry, Environmental Management and/or other relevant fields;
- extensive experience in wetlands conservation and management and broad experience in international project development and execution;
- a proven track record in coordination and negotiation skills
- significant professional experience in Malaysia, including experience in dealing with Federal and State Government agencies as well as the Malaysian non-government sector;
- experience in dealing with multilateral/ bilateral donor-funded projects

## 2. National Experts (Sarawak, Sabah and Pahang)

*(Detailed Terms of Reference for the National Experts will be finalised by the National Project Director in consultation with the Chief Technical Advisor upon the latter's appointment)*

Three National Experts will be engaged, who will be responsible for Project activities in Sarawak, Sabah and Pahang respectively. The National Experts will be responsible for preparation and implementation of all activities in their respective site component. They will be directly responsible for the successful implementation of each site component, and will exercise day-to-day supervision over all Project activities undertaken at their respective site. The National Experts will be members of the Project Support Unit, and as such will report directly to the Project Chief Technical Advisor. In addition, they will liaise closely with the respective State Coordinator, and will work with the State Coordinator in managing the activities of the relevant Site Unit.

The National Experts will be out-posted to each respective State and will normally be based at the Site Units to be established therein. However, significant travel to the Project Support Unit and some travel to other sites is envisaged.

In addition to their primary responsibility over their respective site components, each National Expert will be expected to provide his/her expertise to the other two site units, and to the PSU, in undertaking activities relevant to their particular specialisation. Therefore, for instance, the National Expert for Sarawak, who will possess significant technical expertise in Protected Area Management, will also be expected to contribute to Protected Area Management activities in Klias (Sabah) and SEPPSF (Pahang). In undertaking such support and technical back-stopping work, the National Experts will act under the direction of the Project CTA, who will at all times have final authority over the deployment of National Experts (under the overall direction of the NPD).

Each National Expert will have significant experience in the thematic area of their respective site, i.e. in Protected Area Management for Sarawak, Integrated Land Use Planning for Sabah and Sustainable Resource Utilisation for Pahang. In addition, each National Expert will be expected to have relevant academic qualifications (e.g. in Environmental Management

### 3. Administrative and Support Staff

*(Detailed Terms of Reference for all administrative and support staff will be prepared by the Chief Technical Advisor during project inception)*

All Administrative and Support staff will be members of the Project Support Unit, and will be contracted on a full-time basis for the duration of the project (60 months). They will report directly to the Project CTA, and will be jointly responsible for the day-to-day administration of the PSU. All support staff are expected to demonstrate a high degree of initiative, pro-activeness and enthusiasm. Prior experience with the United Nations, non-governmental institutions dealing with conservation and sustainable development or the Government or diplomatic sectors would be assets. All staff members are expected to possess verbal and written fluency in English and Bahasa Malaysia.

#### a. Administration & Finance Assistant

The Admin & Finance Assistant will assist the CTA in administering the PSU, and will be responsible for local procurement, arranging mission travel and other administrative duties. In addition s/he will be responsible for managing project finances, overseeing receipts and disbursements as well as staff salaries and benefits and payments to consultants. The Admin & Finance Assistant will also be responsible for all financial reporting to and requests for funds from the Executing Agency. In the absence of the CTA and National Experts, the Admin & Finance Assistant will be responsible for management of the PSU and its staff.

Qualifications for this position include a recognised diploma or equivalent qualification in business administration, accounting or bookkeeping, as well as training or practical experience in office management and secretarial functions. Familiarity with major computer software packages (word processing, spreadsheets, accounting software and electronic mail and the Internet) is essential. Prior experience in UNDP procedures and practices would be a major asset.

#### b. Editorial Assistant

The Editorial Assistant will be expected to work closely with all professional staff as well as consultants and subcontractors in preparing and producing written and other materials for the Project. The ability to work unsupervised is important, as well as the ability to meet tight deadlines and to work under pressure.

Highly developed writing skills are required, in both English and Bahasa Malaysia. Prior experience in editorial work is a key asset, whether in the publishing industry, the media or advertising. Training or experience in multimedia and Internet-base publishing (particularly Web publishing) would be a major advantage.

c. Secretary/ Receptionist

The Secretary/ Receptionist will be responsible for providing secretarial support to the Project CTA and National Experts. S/he will be responsible for coordinating staff movements, dealing with mail, electronic mail, fax and telephone communications and visitors to the PSU. S/he will also be responsible for providing secretarial support to the Project Steering Committee, including taking minutes at PSC meetings and dealing with PSC correspondence.

The Secretary/Receptionist will be expected to display a high degree of organisational ability and the ability to undertake multiple tasks at the same time. The ability to meet deadlines and to work under pressure is crucial. Formal training in secretarial skills (e.g. Professional Secretarial Certificate or equivalent) would be desirable, but significant practical experience in secretarial work would be an acceptable substitute. Experience or training in major PC software packages, particularly word-processing and electronic mail/Internet software would be required, and experience in project management software would be an asset. Language abilities (in addition to the required fluency in English and Bahasa Malaysia) would also be an advantage, particularly Chinese dialects and/or East Malaysian languages (Iban, Kadazandusun, etc.)

## **SHORT-TERM POSITIONS**

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*(The plan for consultancies has been designed to allow international consultants to provide short-term, periodic and targeted assistance to support work at each of the project sites as and when necessary. All international consultants will work in association with national consultants. Detailed Terms of Reference and Scopes of Work for all short-term positions will be prepared by the CTA/National Experts prior to the selection and contracting of short-term consultants. These terms of reference will, where possible, be included in the Annual Work plans to be submitted to the State Wetlands Management Committees and the Project Steering Committee.)*

### **International Consultants**

#### **A. Sarawak**

##### **1. PSF Ecologist**

The PSF ecologist will work closely with the national consultant ecologist/biologist, and his/her precise terms of reference may vary according to the findings of work initiated by the latter. In general, the international PSF ecologist will bring his/her substantial experience in conducting ecological assessments of wetland (including lacustrine) habitats, to an assessment of the ecological and biological importance and threats facing LBNP. This work will build directly on work undertaken in this area during the pilot phase of the project. In particular, the ecologist will: identify habitat and species distributions, specific threats and their ecological consequences, and support the design and development of an ecological monitoring programme.

##### **2. PSF & Floodplain Hydrologist**

The PSF and floodplain hydrologist will be responsible to assess the hydrological regime of the floodplain system in and around LBNP. In particular, s/he will consider the mechanisms of water flow and hydrological discharge/recharge within the PSF and neighboring lake ecosystems. This work will also take into account possible hydrological changes associated with oil palm development in the area.

##### **3. Protected Area Management Specialist**



## **B. Sabah**

### **1. PSF Ecologist**

The PSF ecologist will work closely with the national consultant in PSF ecology/management, and his/her precise terms of reference may vary according to the results of work initiated by the latter. In general, the international PSF ecologist will bring his/her substantial experience in conducting ecological assessments, particularly of wetland habitats, to an assessment of the ecological and biological importance and threats facing Klias Peninsula. This work will build directly on work undertaken during the pilot phase of the project. In particular, the ecologist will: identify habitat and species distributions, specific threats and their ecological consequences, and support the design and development of an ecological monitoring programme for the forestry reserves.

### **2. Management Planning Specialist**

The management planning specialist will be responsible for the development of specific strategies and action plans to ensure effective conservation of globally significant species and habitats within project areas at Klias Peninsula. This will include in particular the preparation of an integrated management plan for the relevant forest reserves.

## **C. Pahang**

### **1. PSF Ecologist**

The PSF ecologist will work closely with the national consultant in PSF ecology/management, and his/her precise terms of reference may vary according to the results of work initiated by the latter. In general, the international PSF ecologist will bring his/her substantial experience in conducting ecological assessments, particularly of wetland habitats, to an assessment of the ecological and biological importance and threats facing SEPSF. This work will build directly on work undertaken during the pilot phase of the project. In particular, the ecologist will: identify habitat and species distributions, specific threats and their ecological consequences, and support the design and development of an ecological monitoring programme for the forestry reserves.

## National Consultants

### A. Sarawak

#### 1. Ecologist/ Biologist

The PSF ecologist/biologist will work closely with the international consultant PSF ecologist. In general, the PSF ecologist will bring his/her substantial experience in conducting ecological assessments of wetland (including lacustrine) habitats, to an assessment of the ecological and biological importance and threats facing LBNP. This work will build directly on work undertaken in this area during the pilot phase of the project. In particular, the ecologist will: identify habitat and species distributions, specific threats and their ecological consequences, and support the design and development of an ecological monitoring programme.

#### 2. PSF/ Protected Area Management Specialist

The protected area management specialist will work closely with the international consultant in protected area management. S/he will be closely involved with the development of a comprehensive management plan for LBNP. This will include, *inter alia*, the following aspects: zonation of the park, e.g., buffer zones, activity zones, core protection zones and multiple use zones; development of a series of action plans covering species, habitats, hunting, hydrology, fisheries and ecotourism.

#### 3. Socio-Economist/ Participatory Specialist

The Socio-Economist/ Participatory Specialist will be responsible for identifying, studying and involving local communities, industries, agricultural enterprises and other local stakeholders in the activities, objectives and goals of the Project. His/her primary responsibility will be to ensure that the activities and objectives of the Project are socially sustainable in the long term, and to ensure that local stakeholders are aware of, involved with and committed to the goals and objectives of the Project.

The Socio-Economist/ Participatory specialist will also have primary responsibility for ensuring that all key minority or disadvantaged groups are involved and represented in the Project's activities. These groups include women, ethnic minorities (e.g. Penan, Iban and Berawan tribespeople), youths and other communities who might otherwise be marginalized or

## **B. Sabah**

### **1. PSF Ecology/ Management Specialist**

The PSF ecologist will work closely with the international consultant in PSF ecology. In general, the PSF ecology/management specialist will bring his/her substantial experience in conducting ecological assessments, particularly of wetland habitats, to an assessment of the ecological and biological importance and threats facing Klias Peninsula. This work will build directly on work undertaken during the pilot phase of the project. In particular, the ecologist will: identify habitat and species distributions, specific threats and their ecological consequences, and support the design and development of an ecological monitoring programme for the forestry reserves.

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## **C. Pahang**

### **1. PSF Ecology/ Management Specialist**

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The Socio-Economist/ Participatory specialist will also have primary responsibility for ensuring that all key minority or disadvantaged groups are involved and represented in the Project's activities. These groups include women, ethnic minorities (e.g. Orang Asli tribes), youths and other communities who might otherwise be marginalized or excluded. Specific attention should be paid to the identification and involvement of women and ethnic minorities, and all efforts made to involve these groups should be documented in Project results and publications.

## **D. National**

### 1. Training Specialist

The National Training Specialist will coordinate in-country training needs and programmes, organise workshops and other forms of training nationally and at each site, and undertake/oversee training activities identified in the training needs analyses. The forms of training to be undertaken may, *inter alia*, include;

- Training for trainers
- Wetland management concepts and procedures
- Biodiversity overlay planning, preparation and utilisation
- Sustainable development planning
- Networking and communications
- Participatory Rural Appraisal techniques and approaches
- Project management and financial management tools and techniques

## **SUBCONTRACTS**

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*(Detailed Terms of Reference for all subcontracts, including timeframe, deliverables, reporting and supervision, budget and payment structure, etc. will be drawn up by the Project CTA in consultation with the relevant National Experts, and shall be reviewed and approved by the NPD prior to the contracting of services. Where appropriate such Terms of Reference may also be referred for review by staff of UNDP Malaysia and UNDP-GEF to ensure technical completeness.)*

### **A. Sarawak Component**

#### **1. Park Interpretation**

One of the primary strategies for sustainable use of the Loagan Bunut National Park is to encourage sustainable tourism or 'eco-tourism' activities in the Park area. Substantial Government co-financing has been committed to developing suitable tourism infrastructure in the Park and surrounding areas, and tourism-related activities form one of the key alternative sustainable livelihood strategies being considered for communities in the Park vicinity.

In supporting the development of sustainable tourism activities in the Park area, one major contribution of the Project is assistance in developing and producing Park interpretation materials, based upon the ecological and other material being produced by the Project at Loagan Bunut. The purpose of this sub-contract is to assist in the preparation and production of Park interpretation materials for the benefit of tourists and other visitors to the Park. The sub-contractor will be expected to:

- Collect, collate and evaluate available materials on the Loagan Bunut National Park, the Project's activities at the Park and the ecological significance of the Park and its faunal and floral communities.
- Distill and present these materials in formats and media suitable for the effective dissemination of such information to visitors, including tourists, educational visitors and others.
- Produce interpretation materials, both permanent (signboards, displays, websites, etc.) and distributed (brochures, flyers, fact-sheets, multimedia content, etc.) to promote the Park, to educate general and

The sub-contract will require the services of contractors with experience in designing and developing interpretation materials, preferably (but not essentially) with experience in interpretation work for nature- or conservation-based sites.

## 2. Stakeholder Participation Plan

The involvement and commitment of local communities will be one of the key factors governing the success of the Loagan Bunut component. A variety of native tribes and other local communities inhabit the surrounding areas, including Berawan, Iban and Penan native tribespeople and workers in oil palm and timber companies. In addition, key economic stakeholders such as the owners and managers of the surrounding oil palm plantations and upstream timber concessions also need to be brought into the Project, to be made aware of its goals and objectives and to be given the opportunity to contribute to its success.

The primary purpose of the Stakeholder Participation Plan is therefore to identify and involve all local stakeholders in the activities, objectives and goals of the Project. The sub-contractor will be expected to work closely with the Socio-Economist/ Participatory Specialist, and will be expected to:

- Identify, study and detail all key local stakeholders in the Loagan Bunut area, including local communities, economic and commercial stakeholders, NGOs and other community/social groups, etc.
- Evaluate and report on the ways in which the identified stakeholders interact with the site area; e.g. the 'stake' which these stakeholders have in the Project site. This evaluation will include both positive and negative impacts of stakeholder activity, and the potential ways in which any negative impacts can be mitigated.
- Devise a plan to inform all local stakeholders of the activities, objectives and proposed outcomes of the Project, to elicit their feedback on these proposals and to incorporate any key feedback, concerns or objections into the Project activities and workplans.
- Implement the above plan after it has been considered and approved by the National Expert and Project CTA. If possible (time permitting) the plan will be tabled at a meeting of the Wetlands Management Committee and Project Steering Committee.

areas. The Project intends to demonstrate conservation and sustainable use at the three Project sites, with the intention that these demonstrations will be documented and replicated in other PSF areas, both within Malaysia and in other tropical PSF regions (e.g. Indonesia, Thailand and Indo-China). Therefore, the effective dissemination of the activities, results and outputs of the Project is very important.

The Project also recognises the importance of involving and gaining the support of all existing and potential stakeholders in the Project sites, in order to ensure that the Project's goals and achievements are supported and sustained beyond the lifetime of the Project itself. The success of the Project depends on the support of those communities, organisations and agencies that live and work in and around the Project site. A prerequisite for gaining the support of such stakeholders is that the stakeholders themselves must be aware of the existence, aims and activities of the Project.

Therefore, a key component of the Project's activities is awareness, both amongst local stakeholders as well as amongst stakeholders of other PSF areas in the region. To this end a sub-contractor will be engaged to devise and implement an on-going awareness campaign to publicise the Project's aims, activities and successes. The key objective of the awareness campaign will be to distill and disseminate information concerning the Project, to ensure that goals achieved, lessons learnt and activities undertaken are publicised to all local stakeholders and others involved in the management and conservation of tropical PSF areas. The main responsibilities of the sub-contractor will be to:

- Devise an on-going awareness campaign for the duration of the Project, to publicise the Project's existence, activities, objectives and results. The campaign will emphasise the importance of sustainable utilisation of PSF areas, and will also emphasise the efforts being undertaken to achieve sustainable utilisation through the Project.
- Devise and detail quantitative and qualitative monitoring and evaluation (M&E) procedures and indicators to measure the impact of the proposed campaign. These procedures and indicators are to be reviewed and accepted by the Project CTA and NPD.
- Implement the awareness campaign upon review and acceptance by the Project CTA and NPD. If possible the proposed campaign will

achieved and lessons learnt. An important component of this report will be mechanisms, structures and processes for continued awareness-raising activities within the context of the Project and its successor activities.

## **B. Sabah Component**

### **1. Awareness Campaign**

One of the key objectives of the Project is to devise methods, processes and structures for ensuring the long-term conservation and sustainable use of PSF areas. The Project intends to demonstrate conservation and sustainable use at the three Project sites, with the intention that these demonstrations will be documented and replicated in other PSF areas, both within Malaysia and in other tropical PSF regions (e.g. Indonesia, Thailand and Indo-China). Therefore, the effective dissemination of the activities, results and outputs of the Project is very important.

The Project also recognises the importance of involving and gaining the support of all existing and potential stakeholders in the Project sites, in order to ensure that the Project's goals and achievements are supported and sustained beyond the lifetime of the Project itself. The success of the Project depends on the support of those communities, organisations and agencies that live and work in and around the Project site. A prerequisite for gaining the support of such stakeholders is that the stakeholders themselves must be aware of the existence, aims and activities of the Project.

Therefore, a key component of the Project's activities is awareness, both amongst local stakeholders as well as amongst stakeholders of other PSF areas in the region. To this end a sub-contractor will be engaged to devise and implement an on-going awareness campaign to publicise the Project's aims, activities and successes. The key objective of the awareness campaign will be to distill and disseminate information concerning the Project, to ensure that goals achieved, lessons learnt and activities undertaken are publicised to all local stakeholders and others involved in the management and conservation of tropical PSF areas. The main responsibilities of the sub-contractor will be to:

- Devise an on-going awareness campaign for the duration of the



- Implement the awareness campaign upon review and acceptance by the Project CTA and NPD. If possible the proposed campaign will also be reviewed and endorsed by the Wetlands Management Committee and Project Steering Committee.
- Monitor the impact and effectiveness of the awareness campaign, and modify, reposition and redirect awareness activities where necessary to achieve maximum impact.
- Provide regular status reports on the awareness campaign, utilising the M&E indicators previously devised.
- At the end of the stipulated period, prepare a comprehensive report detailing all activities undertaken under the sub-contract, successes achieved and lessons learnt. An important component of this report will be mechanisms, structures and processes for continued awareness-raising activities within the context of the Project and its successor activities.

## **C. Pahang Component**

### **1. Awareness Campaign**

One of the key objectives of the Project is to devise methods, processes and structures for ensuring the long-term conservation and sustainable use of PSF areas. The Project intends to demonstrate conservation and sustainable use at the three Project sites, with the intention that these demonstrations will be documented and replicated in other PSF areas, both within Malaysia and in other tropical PSF regions (e.g. Indonesia, Thailand and Indo-China). Therefore, the effective dissemination of the activities, results and outputs of the Project is very important.

The Project also recognises the importance of involving and gaining the support of all existing and potential stakeholders in the Project sites, in order to ensure that the Project's goals and achievements are supported and sustained beyond the lifetime of the Project itself. The success of the Project depends on the support of those communities, organisations and agencies that live and work in and around the Project site. A prerequisite for gaining the support of such stakeholders is that the stakeholders themselves must be aware of the existence, aims and activities of the Project.

Therefore a key component of the Project's activities is awareness both

and conservation of tropical PSF areas. The main responsibilities of the sub-contractor will be to:

- Devise an on-going awareness campaign for the duration of the Project, to publicise the Project's existence, activities, objectives and results. The campaign will emphasise the importance of sustainable utilisation of PSF areas, and will also emphasise the efforts being undertaken to achieve sustainable utilisation through the Project.
- Devise and detail quantitative and qualitative monitoring and evaluation (M&E) procedures and indicators to measure the impact of the proposed campaign. These procedures and indicators are to be reviewed and accepted by the Project CTA and NPD.
- Implement the awareness campaign upon review and acceptance by the Project CTA and NPD. If possible the proposed campaign will also be reviewed and endorsed by the Wetlands Management Committee and Project Steering Committee.
- Monitor the impact and effectiveness of the awareness campaign, and modify, reposition and redirect awareness activities where necessary to achieve maximum impact.
- Provide regular status reports on the awareness campaign, utilising the M&E indicators previously devised.
- At the end of the stipulated period, prepare a comprehensive report detailing all activities undertaken under the sub-contract, successes achieved and lessons learnt. An important component of this report will be mechanisms, structures and processes for continued awareness-raising activities within the context of the Project and its successor activities.

## **D. National Component**

### **1. National Awareness Campaign**

One of the key objectives of the Project is to devise methods, processes and structures for ensuring the long-term conservation and sustainable use of PSF areas. The Project intends to demonstrate conservation and sustainable use at the three Project sites, with the intention that these demonstrations will be documented and replicated in other PSF areas, both within Malaysia and in other tropical PSF regions (e.g. Indonesia, Thailand and Indo-China). The effective dissemination of the activities results and outputs of the Project is

Therefore, a key component of the Project's activities is awareness, both amongst communities and stakeholders in Malaysia as well as amongst stakeholders of other PSF areas in the region. To this end a sub-contractor will be engaged to devise and implement an on-going awareness campaign to publicise the Project's aims, activities and successes. The key objective of the awareness campaign will be to distill and disseminate information concerning the Project, to ensure that goals achieved, lessons learnt and activities undertaken are publicised to all local stakeholders and others involved in the management and conservation of tropical PSF areas. The national awareness campaign will coordinate and build upon the awareness activities to be undertaken at State level for each site, and will build upon the local structures, processes and achievements of these State programmes. The main responsibilities of the sub-contractor will be to:

- Devise an on-going national awareness campaign for the duration of the Project, to publicise the Project's existence, activities, objectives and results. The campaign will emphasise the importance of sustainable utilisation of PSF areas, and will also emphasise the efforts being undertaken to achieve sustainable utilisation through the Project and its activities at the three Project sites.
- Devise and detail quantitative and qualitative monitoring and evaluation (M&E) procedures and indicators to measure the impact of the proposed campaign. These procedures and indicators are to be reviewed and accepted by the Project CTA and NPD.
- Implement the awareness campaign upon review and acceptance by the Project CTA and NPD. The proposed campaign will also be reviewed and endorsed by the Project Steering Committee at its next scheduled meeting. Activities in the campaign may be initiated under the authority of the CTA and NPD, prior to endorsement by the PSC.
- Monitor the impact and effectiveness of the awareness campaign, and modify, reposition and redirect awareness activities where necessary to achieve maximum impact.
- Provide regular status reports on the awareness campaign, utilising the M&E indicators previously devised.
- At the end of the stipulated period, prepare a comprehensive report detailing all activities undertaken under the sub-contract, successes achieved and lessons learnt. An important component of this report will be mechanisms, structures and processes for continued

## **COMMITTEES AND PROJECT UNITS**

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### **1. National Steering Committee**

The National Steering Committee will be the primary governing and management body responsible for management and supervision of the Project. The NSC will comprise representatives from all agencies and Government ministries involved in the project, as well as each of the State Governments, the UNDP/GEF and other stakeholders. The NSC will convene at least once per year, and more frequently if the Committee so desires.

The NSC's primary task will be to review and comment upon the activities of the Project Support Unit and each State component, as well as to review and comment upon the work plans prepared for each component. The NSC will at its annual meeting review activities undertaken during the preceding year and to review component work plans for the coming year. The Project Support Unit will serve as Secretariat to the NSC, under the supervision of the National Project Director.

### **2. Wetlands Management Committees**

Wetlands Management Committees will be established to oversee the activities of the Project at each individual State site. These Committees will consist of representatives from the Implementing Agency, the Chief Technical Advisor and relevant National Expert, a Chair nominated by the State Government and representatives from local authorities, district offices and State Government departments and agencies involved in activities at the Project site. The Chair of the Committee may either be the State Coordinator, or another person of sufficient authority and seniority to ensure cooperation and coordination amongst local and State authorities. In the event that a person other than the State Coordinator chairs the Committee, the State Coordinator will serve as Alternate Chair.

The Wetlands Management Committee will be responsible for overseeing all activities of the Project at the relevant Site. The Committee will meet no less

### **3. Project Support Unit**

The Project Support Unit will consist of the Project Chief Technical Advisor, three National Experts and three Administrative and Support Staff (Admin & Finance Assistant, Editorial Assistant and Secretary/ Receptionist). The PSU will be the primary coordinating and administrative body of the Project, and will be constituted on a full-time basis for the duration of the Project. The location of the PSU will be determined by the Implementing Agency, which will also be responsible for ensuring the provision of adequate office space, facilities, etc. for the Unit.

The primary responsibilities of the PSU will be:

- To oversee and coordinate the implementation of all Project activities, as detailed in the Annual Work plans to be prepared by the CTA and approved by the PSC.
- To undertake all administrative and financial management tasks required for the smooth execution of all Project activities.
- To assist the CTA in preparing and publishing all reports and Work plans required by the Project.
- To coordinate, support and execute all National component activities of the Project, including training activities, workshops and awareness programmes.
- To identify, engage, contract and support all long-term and short-term consultants engaged by the Project.
- To evaluate, engage, contract and support all sub-contractors engaged by the Project.
- To act as Secretariat for the Project Steering Committee.

### **4. Site Units**

Project Site Units will be established at all three Project sites. These Site Units will be housed by the Executing Agency at locations proximate and accessible to the respective Project site; i.e. for Sarawak at the Forestry Department office in Miri or the National Parks office to be established at Loagan Bunut, for Sarawak at the Forestry Department Office in Kuching and for Pahang at the Forestry Department office in Pekan. The proposed locations and facilities to be provided for the Site Units will be detailed to

member will be seconded to the Site Unit on a full-time basis at each Site, to ensure continuity and efficient coordination of activities.

The management and supervision of the Site Units will be the responsibility of the respective State Coordinator, with the close cooperation and assistance of the relevant National Expert. The National Expert to be out-posted to each site component will be provided with office facilities and administrative support within the Site Unit and, with the delegated authority of the State Coordinator, will assist in the day-to-day running and supervision of the Site Unit.

The Project Site Units will be responsible for undertaking all activities to be conducted at each respective site. The Site Units will coordinate all activities to be undertaken at the sites, and will assist, coordinate and support all consultants and sub-contractors engaged by the Project at their respective site. The key responsibilities of the Site Units will be:

- To assist the State Coordinator in executing and supervising all Project activities to be undertaken at the respective Project site.
- To assist the State Government and Forestry Department in management, surveillance and oversight over the Project sites, to ensure that no detrimental activities or impacts occur (e.g. land clearing, open burning, encroachment or illegal settlement, environmental degradation).
- To provide administrative and technical support to the out-posted National Expert in discharging his/her duties and responsibilities.
- To assist the State Coordinator and National Expert in planning and programming the Annual Workplan.
- To act as Secretariat for the respective State Wetlands Management Committee.

ID	Task Name	Year 1				Year 2				Year 3				Year 4				Year 5				Q1
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1	Project Inception																					
7	Tri-Partite Review																					
12	Project Performance Evaluation Reports																					
19	Mid-Term Evaluation																					
20	Project Terminal Report																					
21	Terminal Tri-Partite Meeting																					
22																						
23	1. Data collection, monitoring programme & info system																					
24	1.1 Information/Analysis LBNP																					
25	1.1.1 Detailed ecological assessment																					
26	1.1.2 Hydrological regime of floodplain																					
27	1.1.3 Ecological Monitoring Programme																					
28	1.1.4 Participatory Appraisals																					
29	1.1.5 Project M&E indicators																					
30	1.2 Information/ Analysis Klias																					
31	1.2.1 Detailed Ecological assessment																					
32	1.2.2 Ecological Monitoring Programme																					
33	1.2.3 Hydrological assessment																					
34	1.2.4 Land use information collection																					
35	1.2.5 Demographic & socio-economic data collection																					
36	1.2.6 Project M&E indicators																					
37	1.3 Information/ Analysis Pahang																					
38	1.3.1 Detailed ecological assessment																					
39	1.3.2 Ecological monitoring programme																					
40	1.3.3 Hydrological assessment																					
41	1.3.4 Timber resource assessment																					
42	1.3.5 Participatory rural appraisals																					
43	1.3.6 Project M&E indicators																					





ID	Task Name	Year 1				Year 2				Year 3				Year 4				Year 5				Q1
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
78	<b>3.3 Implementation/ Demonstration Pahang</b>																					
79	3.3.1 Optimum harvesting simulation model																					
80	3.3.2 Implement management & protection plans																					
81	3.3.3 Forest rehabilitation activities																					
82	3.3.4 Small-scale hydro solutions																					
83																						
84	<b>4. Inter-agency coordination networks</b>																					
85	<b>4.1 Inter-sectoral coordination LBNP</b>																					
86	4.1.1 EIA enforcement coordination																					
87	4.1.2 Alternative livelihoods coordination																					
88	4.1.3 Development impact mitigation																					
89	<b>4.2 Inter-sectoral coordination Klias</b>																					
90	4.2.1 Wetlands Management/ Project Steering Committee																					
91	4.2.2 Ensure appropriate institutional linkages																					
92	<b>4.3 Inter-sectoral coordination Pahang</b>																					
93	4.3.1 Establish Wetlands Management Committee																					
94																						
95	<b>5. Stakeholder awareness</b>																					
96	<b>5.1 Awareness LBNP</b>																					
97	5.1.1 Design & implement awareness campaign																					
98	5.1.2 Awareness seminars																					
99	<b>5.2 Awareness Klias</b>																					
100	5.2.1 Awareness campaigns																					
101	<b>5.3 Awareness Pahang</b>																					
102	5.3.1 Awareness campaigns																					
103	5.3.2 Seminars and field visits for logging contractors																					
104	<b>5.4 Awareness- National</b>																					
105	5.4.1 Dissemination of lessons & experiences																					

ID	Task Name	Year 1				Year 2				Year 3				Year 4				Year 5				Q1
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
107	<b>6. Strengthened capacities</b>																					
108	<b>6.1 Institutional strengthening LBNP</b>																					
109	6.1.1 Training needs analysis																					
110	6.1.2 Workshops and training programmes																					
111	<b>6.2 Institutional strengthening Klias</b>																					
112	6.2.1 Training needs analysis																					
113	6.2.2 Workshops & training courses																					
114	<b>6.3 Institutional strengthening Pahang</b>																					
115	6.3.1 Training needs analysis																					
116	6.3.2 Workshops & training courses																					
117	6.3.3 RIL training for timber industry personnel																					
118	<b>6.4 Institutional strengthening National</b>																					
119	6.4.1 Training manuals & modules for PSF management																					

## **ANNEX 4: STAKEHOLDER PARTICIPATION PLAN**

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### **1.0 Introduction**

This Annex summarises all research, fieldwork, interviews and analysis undertaken in identifying and consulting local stakeholders during the formulation of the Project and the preparation of the Project Brief. The Annex also details arrangements that have been planned to ensure effective and inclusive stakeholder participation in and support for the activities and objectives of the Project.

Each Project site is analysed in a separate section; Section 2 for Loagan Bunut National Park (LBNP), Section 3 for the Klias Peninsula and Section 4 for the South-East Pahang Peat Swamp Forest (SEPPSF). Each site section begins with a subsection detailing socio-economic and resource use analysis of the project site and its surrounding areas (e.g. subsection 2.1 for LBNP). Stakeholder consultation and participation (SCP) activities during the formulation of the Project Brief are outlined in the following sub-section (e.g. subsection 2.2), as are SCP arrangements planned for the Project implementation phase.

Following upon the three site-specific sections, section 5 discusses consultation activities that were undertaken at the Federal level, while Section 6 examines the structures and processes that have been proposed to ensure continuing stakeholder participation in the Project.

## **2.0 Loagan Bunut National Park (LBNP)**

### ***2.1 Socio-economics and Resource Use Overview***

#### **2.1.1 Methodology**

Baseline data for Loagan Bunut was collected in the course of field visits by various members of the project team on a number of different occasions. Key population concentrations such as longhouses and settlements in the vicinity of the project area were visited, and formal and informal interviews conducted with residents and local community leaders. In particular interviews were conducted with residents of the main Berawan and Iban longhouses in the vicinity of the Park, and with National Parks officers familiar with the area. Secondary data was also collected from agencies such as the Forestry Department, National Parks and Wildlife Office, Natural Resources and Environment Board and other Government agencies, both in meetings with department heads and from various published sources.

#### **2.1.2 Population**

The population in the Site area consists largely of native longhouse inhabitants, as well as workers in the surrounding oil palm plantations and logging companies. Total population in the immediate vicinity (e.g. up to one kilometer from the Park boundaries) is estimated at 4,000 to 4,500 people, of which approximately 2,500 are native inhabitants. The native inhabitants can be categorised into three broad groups:

- **The native Berawan population:** holders of Native Customary Rights to fish, hunt and cultivate padi in Loagan Bunut, the Berawan are concentrated mainly in Rumah Kagan Sigeh at Long Teru. Other Berawan communities exist upstream at Long Tabing and Long Teran, as well as in the vicinity of Mulu National Park to the north-east.
- **The native Iban population:** settled along the left bank of Batang Tinjar facing the Site, these Iban settlements have been in existence since before World War II (according to the inhabitants). These are mainly padi farming communities, with Native Customary Rights to padi farmland along the left bank of the Batang Tinjar to the west of the Site.
- **The settler Iban population:** More recent migrants (said to be from the Sibuan area), settler Iban are located in the longhouses of Rumah Loh and Rumah Rieng. The inhabitants are mainly padi farmers, cultivating small plots in the vicinity of the longhouses. These settlements are located within the boundaries of the National Park, as are some of the padi plots. However the State Government has provided assurances that, despite the encroachment onto marginal areas of the National Park, no involuntary resettlement of these communities will be undertaken.

## ANNEX 4: STAKEHOLDER PARTICIPATION

The major population concentrations in the Site area occur along the banks of the Batang Tinjar, stretching from the confluence of the Batang Tinjar and Sungai Teru in the North (site of the Long Teru Berawan longhouse) to the settlement of Long Lapok in the South. Key settlements include:

LOCATION	DESCRIPTION	ESTIMATED POPULATION	PRIMARY ECONOMIC ACTIVITY
Rumah Kagan Sigeh, Long Teru	Largest Longhouse in the area, main Berawan population concentration, holders of Native Customary Rights for Loagan Bunut. Main longhouse destroyed in a fire late 1998, and is being rebuilt.	600 people (56 pintu)	Fishing in Loagan Bunut, along Sungai Teru, some padi cultivation at Sungai Bunan, some non-timber forest products (rotan, damar) collection.
Rumah Tingang	Small Berawan longhouse at south-eastern end of Loagan Bunut.	40 people (6 pintu approx.)	Fishing in Loagan Bunut, some vegetable farming.
Rumah Ramba Nanga Lait	Native Iban Longhouse at mouth of Sungai Lait.	250 people (24 pintu)	Padi farming, part-time fishing along Batang Tinjar, vegetable farming and hunting (mainly for wild boar).
Lubok Mulong	Native Iban Longhouse	200 people (25 pintu approx.)	Padi farming, some fishing along Batang Tinjar and hunting, non-timber forest product collection.
Long Ajoi	Native Iban Longhouse	300 people (30 pintu approx.)	Padi and vegetable farming, some fruit orchards, part-time fishing and hunting.
Rumah Jengging Nanga Majang	Native Iban Longhouse at the mouth of Sungai Bot. Inhabitants claim to be the original Iban settlers along this stretch of Batang Tinjar.	186 people (23 pintu)	Padi and vegetable farming, some part-time fishing and hunting, small-scale hunting.
Long Baligam	Native Iban/Penan Longhouse	200 people (20 pintu approx.)	Padi farming, some part-time fishing and hunting.
Rumah Riang	Settler Iban Longhouse, located within Park boundaries. Longhouse established c.1973.	325 people (20 pintu)	Padi farming (partly within Park boundaries), some part-time fishing and hunting.
Rimbunan Hijau Logging Camp	Logging Camp. Mixed population of native tribesmen, some other Malaysian and Indonesian workers.	120 people	Collection, certification and transportation of logs, base camp for logging company workers. Forestry Department base and certification office.
Rumah Loh	Settler Iban Longhouse, located within Park boundaries. Settlement established early 1970's.	300 people (30-35 pintu approx.)	Padi farming (partly within Park boundaries), vegetable cultivation and employment in Lg. Lapok settlement.
Long Lapok	Mixed settlement. Main road access point (Miri- Long Lama road) and bridge across Batang Tinjar. Major stopping point for the Tinjar Express fast boat service to Marudi.	1,200 people (including the immediate vicinity)	Provides supplies and services for the logging camps and longhouse settlements (provision stores, coffee shops, fuel depot, main express boat stop, road transport to Miri, etc.)

## ANNEX 4: STAKEHOLDER PARTICIPATION

Samling Pond	Log	Logging Camp. Mixed working population of native tribesmen, some other Malaysian and Indonesian workers.	150 people	Collection, certification and transportation of logs, base camp for logging company workers. Management offices including rest house accommodation.
Sungai (Oil Estate)	Lelak (Palm)	Workers quarters for the Estate, located approximately 500 meters from Sungai Teru, east of the Site.	300 people	Workers in the Sungai Lelak Estate (Oil Palm). Occasional fishing along the banks of Sungai Teru opposite the Park.
Other upstream settlements		Various Iban and Berawan longhouses and other settlements outside the immediate vicinity of the Site, e.g Lg. Tabing, Lg. Teran, Lg. Tuyot, Rumah Marinda, Rumah Medit Ali, etc.		Mainly farming, some fishing in Sungai Teru and Batang Tinjar. Some employment in surrounding oil palm estates.

### 2.1.3 Resource Use

The primary economic activities in the Site area are padi farming, fishing and commercial logging and oil palm cultivation. The only legitimate economic activities that occur within the Site itself are fishing, padi cultivation at Sungai Bunan, hunting for personal consumption and the taking of timber for personal use. All these privileges within the Site are limited to the Berawan inhabitants of Long Teru, in accordance with Schedule II of the Final Proclamation of the Park.

The major economic activities in the Park area can be categorised as follows:

#### 2.1.3.1 Fishing

Fishing within the Site area (on Loagan Bunut) is limited to the Berawan people of Long Teru only. Fishing on the lake takes two major forms, major seasonal harvests and daily consumption. The main fishing seasons on Loagan Bunut coincide with periods during which the surface area of the lake is shrinking (i.e. the dry season) mainly in February – March and July. During these periods the Berawan fishermen harvest large quantities of fish using the *Selambau* fishing method, which is unique to Berawan fishing culture. Part of this fish harvest is sold, either in raw form or processed into *keropok* fish crackers at a processing facility at the Rumah Kagan Sigeh longhouse. This processing facility was constructed in the mid 1980's, using materials provided by the Agriculture Department. Fishing also takes place on a daily basis for personal consumption, both on the lake itself and along Sungai Teru, Sungai Bunan, Sungai Loagan Bunut and Batang Tinjar. This small-scale daily fishing is conducted using either cages or baited lines strung along the riverbanks, or on poles in the shallower parts of the lake.

The inhabitants of the Iban longhouses along Batang Tinjar also fish as a part-time activity, for personal consumption. The primary means of fishing is using baited lines strung along the banks of the Batang Tinjar, usually over the mouths of small streams or across deeper holes or pockets in the riverbanks.

#### 2.1.3.2 Padi Cultivation

Padi is the primary food crop grown by native inhabitants in the Site vicinity. The Berawan community at Long Teru cultivates small rice plots at Sungai Bunan at the southern end of Loagan Bunut, while the native Iban longhouses along Batang Tinjar cultivate rice plots along the left bank of that river, inland of their longhouses. The Iban settler longhouses of Rumah Riang and Rumah Loh cultivate plots in the vicinity of their longhouses, within the boundaries of the Park. The rice cultivated is of both wet rice (padi sawah) and hill rice (padi bukit) varieties, depending on the terrain.

#### 2.1.3.3 Other food crops

Aside from padi, various types of vegetables are grown in small home plots, as well as corn, bananas, coconuts and other fruits. Most of these crops are grown either in the immediate vicinity of the longhouses, or in small clearings close by. Some of the Iban longhouses have small cleared plots along the riparian strip of Batang Tinjar, within the Park boundaries.

#### 2.1.3.4 Logging

Logging has taken place both within the Site itself and in the immediate vicinity. Prior to being declared a National Park the Site was a Protected Forest, and was selectively logged for a period of at least ten years. Areas to the south and east of the Site, which are currently under oil palm cultivation, would also have been logged prior to conversion.

At present legal logging within the Site is limited to small-scale extraction by the Berawan community for personal use (construction of homes and boats and as firewood, though most household cooking is now done with gas).

Commercial logging activities at present occur mostly upstream of the Site, along the upper reaches of Batang Tinjar. Logs are floated downstream in rafts, for sorting, tagging and loading onto barges at the Rimbunan Hijau and Samling logging camps near Long Lapok. Some illegal logging activities have also been noted in the Park. The Forest Department conducts regular enforcement operations in the area, and the NPWO dispatches Park Rangers to patrol the Site at least bi-monthly or in response to reports of encroachment, to contain such activities. Illegal logging in the Park is likely to be one of the main cash income generators for many of the longhouse inhabitants on the boundaries of the Park.

#### 2.1.3.5 Non-Timber Forest Products (rotan, damar, fruits and other food products)

The only native inhabitants accorded privileges to harvest non-timber products in the Park are the Berawan of Long Teru. Products harvested include rattan (*rotan*), glue (*damar*) and various fruits and food products. None of the other longhouses in the vicinity reported harvesting such products from within the Park, though it is expected that small-scale encroachments probably occur on a casual basis.

#### 2.1.3.6 Hunting

The Berawan of Long Teru also have the right to hunt non-protected species in the Park, for personal consumption. Hunting occurs on a fairly regular basis, but acts as a secondary food source only, largely when the lake dries up and fish are less abundant. The Berawan have reported encountering Iban hunters encroaching into the Park, particularly from the Iban settler longhouses in the south-west of the Park. Hunting is largely for birds and smaller game.

## ***2.2 Stakeholder Consultation and Participation Activities***

### 2.2.1 Consultation Process

The process of stakeholder consultation for the Loagan Bunut site began with the Project Inception Workshop, which was held on 24 & 25 July 1997. Participants in this kick-off meeting included representatives from the Sarawak State Government as well as scientific, technical, NGO and private-sector representatives. The primary output of this meeting was a set of site selection criteria which eventually resulted in the selection of Loagan Bunut as one of the proposed Sites. This Workshop was followed by meetings of the Project Steering Committee on 25 July and 8 December, pertaining mainly to site selection and nomination.

Preliminary discussions were held with the Sarawak State Forestry Department on 25 November 1997, in their role as the implementing agency for the project in Sarawak. This was followed by a briefing for the State Consultative Committee on 6 January 1998 on nomination of sites.

Preliminary assessment of the LBNP site was conducted during 1-5 March 1998. This assessment visit included ecological and technical analysis, as well as informal consultations with longhouse residents in the vicinity.

A National-level Project Development Workshop was held in Kuala Lumpur on 21 and 22 April 1998. This Workshop included approximately fifty representatives of various State and Federal Government agencies as well as semi-government bodies and NGOs involved with the site. The Workshop included working groups to discuss and amend the site components of the Project brief (including the LBNP component), and was followed by the third meeting of the Project Steering Committee on 24 April.

Further presentations were made to the State Consultative Committee on 8 May, which resulted in final confirmation of Sarawak's participation in the project and endorsement of the project brief.

Following review and comments on the brief by the GEF core unit, a further round of site visits and analysis was conducted during the period 25 August to 3 September 1998. This included stakeholder identification and analysis (both on-site and via Government agencies in Kuching) as well as meetings with a variety of Government, NGO, private-sector and local stakeholders.



#### ANNEX 4: STAKEHOLDER PARTICIPATION

During on-site analysis, interviews were conducted with the inhabitants of a number of longhouses (native settlements) in the Site area, including the following:

<b>Longhouse</b>	<b>Headman</b>	<b>Community</b>
Rumah Kagan Sigeh, Long Teru	Kagan Sigeh	Berawan
Ramba Nanga Lait	Sema ak Ramba	Native Iban
Rm. Nanga Majang (Kuala Bot)	Jengging ak Linggie	Native Iban
Rumah Riag (Long Lapok)	Tuai Rumah Riag	Settler Iban

Interviews were generally conducted with the village headman (where available) as well as the council of village elders and interested residents (both male and female). Individual interviews lasted approximately one to one-and-a-half hours, and encompassed issues such as village demographics, employment and major income sources, interactions with the National Park area (resource use patterns), awareness of Park status and its meaning and implications, the impact of gazettelement of the Park on livelihoods, settlement activity and length of habitation, alternative livelihood options and preferences and preliminary reactions to the Project and its objectives.

Brief socio-economic surveys were also conducted at other major longhouses in the area, including Rumah Tingang, Lubok Mulong, Long Ajoin, Long Baligam, and Rumah Loh. Surveys of economic activities and resource uses in the surrounding area were also conducted, including visits to oil palm plantations on the southern and eastern boundaries of the park, to two logging camps in the vicinity (Rimbunan Hijau and Samling) and to the primary settlement and commercial centre at Lapok.

##### 2.2.2 Stakeholder Feedback

Data and preliminary feedback from the socio-economic surveys was used to refine the proposed activities and objectives for the Project at Loagan Bunut. These objectives and activities were compiled into a simple presentation and informational pamphlets for distribution to local stakeholders and inhabitants. The project consultants conducted a half-day briefing workshop on 26 January 1999, during which the stakeholder analysis team was provided with necessary materials and briefed on the primary socio-economic issues relevant to the Loagan Bunut site.

The stakeholder analysis team conducted a series of field visits during the week of 1 to 6 February 1999, during which time discussions were held at six key longhouses in the area. The schedule of meetings undertaken was as follows:

#### ANNEX 4: STAKEHOLDER PARTICIPATION

Date	Village	No. of participants	Community
3/2/99 12:30-14:00	Rumah Pedimet, Long Baligam	20	Penan
3/2/99 14:20-16:00	Rumah Linggi, Nanga Majang	21	Iban
3/2/99 17:40-19:30	Rumah Umping, Lubok Mulong	30	Iban
4/2/99 11:00-12:00	Long Ajoin	12	Iban
4/2/99 15:30-16:30	Rumah Ramba, Nanga Lait	16	Iban
5/2/99 10:00-12:00	Rumah Kagan Sigeh, Long Teru	22	Berawan

All meetings undertaken were with both male and female villagers. Informational pamphlets [in Malay] outlining the Project background and key proposed activities were distributed. The meetings started with brief presentations on the background and objectives of the Project and the activities proposed for the Loagan Bunut site. The potential impact of these activities on current livelihoods and resource use patterns was discussed, and the discussions also touched upon the potential benefits for local residents arising out of the Project's activities (both direct and indirect). Feedback was actively elicited from the participants, and a range of comments, questions and requests for clarification were received.

The general response to the Project's proposed activities was very positive, and the villagers evinced a high degree of support for conservation and sustainability initiatives at the Park. Environmental degradation in the surrounding areas is already a noticeable concern of the communities, with issues of flooding and water contamination by surrounding oil palm plantations being amongst the most common complaints received. Other socio-economic concerns, such as poverty and a lack of employment opportunities, were also frequently voiced.

The highest degree of support for the Project's proposed activities was received from the Berawan community at Long Teru, which is unsurprising since they have the greatest access to and involvement with the Park. The other villages in the area recognise that the existing NCR structure gives the Berawan community primary position in all activities undertaken in the Park, but these other communities are keen to be involved in any ancillary or indirect activities undertaken in the area, e.g. in support services for eco-tourism and the proposed Park office, as well as in the provision of goods and services such as handicrafts and food products.

### 2.2.3 Key Issues

Key issues raised by the participants have been categorised and listed below:

- Support for conservation and sustainability initiatives: all communities demonstrated an interest in and commitment to the conservation of the Park area. There is an awareness of the need to conserve 'for future generations' and some awareness of the significance of the Park's biodiversity. Villagers appeared aware that some of the flora and fauna in the Park was threatened or otherwise rare, and therefore should be protected.
- Support for establishment of the Park office: all communities showed support for the establishment of a National Parks and Wildlife office at Loagan Bunut. Villagers indicated that such a presence would serve to reduce encroachment and illegal resource extraction, and many villagers were also interested in the potential for employment at the office.
- Environmental degradation and pollution: all villages had detected a decrease in environmental quality in recent years, including declining fish stocks in the rivers, signs of pollution from oil palm plantation runoff and increased flooding.

Poverty and lack of employment opportunities: household income levels in all villages are low, averaging approximately RM200-300 per month. There is also a lack of local employment opportunities, and a perceived insufficiency of agricultural land. A strong willingness was shown to embrace new livelihood opportunities and sources of income. In particular, all communities showed a strong interest in the potential for eco-tourism related activities, including employment opportunities as guides and boatmen. Interest was also shown in the potential to supply local handcrafts and produce to tourists, and to be involved in providing accommodation.

Further feedback and comments from local communities will be channeled to the Project via National Parks and Wildlife Office staff who visit the Park on a regular basis. These staff already have regular meetings with local communities, and have undertaken to record and convey any comments or queries concerning the Project in the absence of Project staff.

## **3.0 Klias Peninsula**

### **3.1 *Socio-economics and Resource Use Overview***

#### **3.1.1 Methodology**

Much of the key socio-economic and resource use data used in the analysis of stakeholders in Klias was collected by the WWF Malaysia project team with whom the project has been cooperating closely in the area. An extensive series of local community interviews was conducted by the WWF team in preparing one of the background reports for the Sabah Biodiversity Conservation Project report. Data from these interviews formed one of the key sources for stakeholder identification and analysis in the Klias Peninsula. Primary data-gathering was also conducted by members of the project team during various visits to the project area and its immediate vicinity. Secondary data sources utilised included various published reports and development proposals for the Klias Peninsula, as well as information provided by representatives of key Government agencies active in the area.

#### **3.1.2 Population**

The population of the Klias Peninsula consists largely of native communities such as the Bisaya, Kadazandusun, Brunei, Kedaya, Dusun Tatana and Bajau. Ethnic Malay and Chinese communities are also found, particularly in the larger settlements and towns. No accurate estimates of population totals are available, however according to the 1991 Census the total population of Kuala Penyu District (approximately half of the Peninsula's population) is 22,614 people. At a rough approximation the total population of the Peninsula would be in the region of 40,000 to 50,000 people.

Major population concentrations in the Peninsula are at the towns of Beaufort, Weston and Kuala Penyu. A large number of villages are scattered throughout the Peninsula, particularly along the banks of the Klias, Padas and Bukau/Api-Api rivers in the vicinity of the project area, and along the Kuala Penyu-Menumbok road on the north-western shore. However the majority of these villages are relatively small, with populations averaging less than 200 people.

- **Beaufort**

Beaufort is the primary regional centre for the Klias Peninsula, and provides commercial, administrative and support services for the population and industries of the region. Founded originally as a logging centre, it has a population of less than 10,000 people but remains the largest town in the vicinity.

- **Weston**

Weston is a large fishing village/town located at the mouth of Sungai Bukau, built partly on stilts over the water. It is one of the largest fishing communities in the Peninsula, and has a total population of approximately 2,200 people.

Weston also functions as a local commercial and administrative centre, providing shops, a hospital and a secondary school which all service the villages in the vicinity.

- Kuala Penyu

Kuala Penyu is a fishing centre located at the northern tip of the Peninsula, at the mouth of Lake Sitompok, a brackish lagoon feeding into Kimanis Bay. The population of Kuala Penyu is estimated to be approximately 6,000 people. Kuala Penyu functions as a local centre for the north-western portion of the Peninsula, and provides facilities such as shops, administrative services, a police station, health centre, etc.

The population in the vicinity of the Project focal area (Klias Forest Reserve and Kampung Hindian Forest Reserve) is concentrated in five main villages; Kampung Pulau Manang, Kampung Bukau, Kampung Meraba, Kampung Inuman, Kampung Lingkungan, along with the town of Weston. The total population of these six population centres is 4,092 people (based on estimates provided by village headmen) of which more than half live in Weston. North of the focal area, the nearest major village is Kampung Suasa, which is located on the southern bank of the Padas River.

### 3.1.3 Resource Use

The major economic activities in the Klias Peninsula are fishing and agriculture. In the Project focal area, primary economic activities are fishing (coastal and riverine), fruit tree cultivation (durian, rambutan and pineapple) and rubber smallholdings. Income levels are relatively low, estimated to average under RM500 per month. Since the Poverty Line monthly household income level for Sabah is RM606, the majority of households in the Klias Peninsula can be categorised as poor.

Amongst the primary resource uses involved are:

#### 3.1.3.1 Fishing

Fishing is the most widespread economic activity in the Klias Peninsula. Both riverine and coastal fishing are practiced, as well as some aquaculture and cage culture activities.

##### (a) Riverine fishing

Fishing activities take place along all the major rivers in the Klias Peninsula, including Sungai Bukau, Sungai Klias and particularly Sungai Padas Damit. Fishing activities also take place in the waterways of the Menumbok mangrove swamps and at other swamplands in the area. The major equipment types used include cast nets, crab (bintuh) nets, gill nets, hook and line and stakes. Amongst the major species caught are mangrove crabs, white shrimp and tiger prawns.

Riverine fishing is practiced by most of the villages located along the banks of these rivers, and particularly at villages such as Kampung Inuman and Kampung Bukau. The catch is largely for personal consumption, although some

fish are sold at the weekly market (tamu) in Weston and from stalls along the main road to Sipitang.

(b) Coastal fishing

Coastal fishing is one of the primary income generators for the region. Fishing activities are concentrated at coastal villages such as Weston, Kampung Lubuk and Kuala Penyu, although coastal fishermen are found at most of the major villages in the region. The major fishing grounds in the area are at Kuala Bintuka and Kuala Mentulud.

The primary fishing methods used include manually-pulled drag nets (pukat karan), cast nets and mechanically-pulled drag nets (pukat tunda). In recent years strong concern has been expressed at the incursion of fishermen from other areas into these grounds, including fishermen from neighbouring countries.

(c) Aquaculture/ cage culture

Cage culture and aquaculture activities have become increasingly popular in the area in recent years. An attempt was made in the mid-1980s to establish a tiger prawn-rearing project by local villagers, but the project was abandoned after some time. Recently some interest has been expressed in reviving this project. An Aquaculture Development Committee has been established in Kampung Bangkalalak, with support from the Ministry of Rural Development, to investigate the possibility of establishing cage culture activities near the mouth of Sungai Padas. Cage culture activities are also being conducted in Weston, with 18 cages currently being farmed at the mouth of the Nabahan River. Amongst the varieties of fish farmed are gerapu, tilapia and siakap. One of the biggest problems encountered in developing aquaculture activities is the high cost and difficulty in obtaining fish fry, which has to be brought in from Kota Kinabalu.

### 3.1.3.2 Agriculture

Agricultural activities in the Peninsula take two major forms; smallholder agriculture by the local population and commercial plantations established by outside interests. One major problem faced in the region is the decline in productivity or the loss of arable land due to saline intrusion. This problem is particularly acute in areas bordering the mangrove forests, such as Kampung Bangkalalak, Kg. Berumbai and Kg. Mentulud.

(a) Smallholder agriculture

The primary agricultural product cultivated by local smallholders is wet rice (padi sawah). Rice cultivation is almost entirely for personal consumption, although small quantities may be sold in neighbouring villages or towns following a particularly good harvest. Most households in the area own small rice plots, often averaging approximately 0.75 ha per lot. Much of this land was allocated by the Ministry of Agriculture, which also provides subsidised fertiliser and other forms of support.

In recent years increasing interest has been shown in the cultivation of oil palm, particularly since the devaluation of the Malaysian Ringgit, which has led to a significant increase in ringgit revenues from such exports. Local residents have

made a number of applications for land to be cultivated with oil palm usually on a communal basis.

Rubber cultivation is also common in the region, although the popularity of rubber is said to be declining due to the low yields in infertile soils and low market prices currently. Rubber cultivation is however still evident as a primary economic activity in areas such as Kampung Bukau and Kampung Pulai Manang.

Other subsistence crops such as bananas, green oranges, durian, rambutan, pineapple, coconuts and various vegetables are also planted in the region, although these are mostly planted as a supplemental activity for personal consumption. Exceptions include relatively large-scale pineapple cultivation in Kampung Meraba and green oranges (limau manis) in Kampung Pulai Manang.

### (b) Commercial Plantations

Agricultural plantations are the primary commercial activities found in the Klias Peninsula. Oil palm plantations are found mainly along the Beaufort- Sipitang road, along the eastern boundary of the Peninsula. The largest of these is the Lumadam Estate, which was also the first commercial oil palm plantation established in the Peninsula. However there is said to be little local employment in these plantations, with most of the workforce said to be immigrant labour from neighbouring countries such as Indonesia and the Philippines. A sugar cane plantation is also in the process of being developed north of Sungai Klias, although the current status of the development is uncertain.

A commercial fruit orchard project is located between Kampung Inuman and Kampung Lingkungan in the Sungai Bukau area. The project was established in the 1970s by a State Government agency, and is currently run as a joint-venture with a private-sector company called Tropical Fruits. The project was originally planned to cover an area of 5,000 acres, however to date only approximately 1,000 acres of this area has been cultivated. The remainder of the area has apparently been earmarked for oil palm cultivation. Inhabitants of a number of neighbouring villages are employed in the fruit orchard, although wage levels are low and there is consequently a high turnover of staff.

### 3.1.3.3 Forest Products

#### (a) Logging

Logging is the longest-established commercial activity in the Klias Peninsula. Beaufort town was established initially as a logging centre, and some activity still takes place in the region. However commercial logging activities at the present time are centered to the south-east of the Peninsula, outside the project area. No significant commercial extraction takes place within the Peninsula today, although activity in the upstream catchment of the Lingkungan and Inuman rivers has caused siltation and other problems in the vicinity of the project area. Beaufort town still provides important support and commercial services for the logging industry in the broader region.

Small-scale logging occurs in the mangrove areas around Menumbok. Timber extraction is generally seen as a subsidiary source of income, however logging activity is said to have increased in the last two to three years, possibly as a result of depleting fisheries and poor agricultural incomes. Some of the extracted timber is sold to middlemen from Brunei and Labuan, however most of the timber is for local consumption, for homes and boats particularly. Some small amounts of wood are also harvested for firewood, although this activity is declining somewhat with the introduction of more modern fuel sources. Timber extraction in the Hindian Forest Reserve [which is gazetted as an Amenity Reserve] has reportedly been halted by Forestry Department officials, though the status of the Reserve remains unchanged.

(b) NTFPs

A variety of non-timber forest products are also harvested in the area. These include swamp grasses and leaves such as nipah, which is used for roof-thatching and basket-weaving, and kirai leaves which are used as cigarette wrappers. Medicinal plants such as raja kayu, tongkat ali and kayu panas are also harvested in the wetland areas, as are rattan and other forest products, for personal consumption and local sale.

##### 3.1.3.4 Other Resource Uses

The wetlands at Padang Teratak are used as communal grazing areas for water buffalo, which are an important economic and cultural resource for the local populations. Livestock cultivation in this manner is not a full-time source of income, but forms a subsidiary income and subsistence source from the sale of stock as well as dairy products. Water buffalo are traditionally seen as an important measure of wealth, and thus the cultivation of such animals has a major cultural significance in addition to its purely economic value.

Other cottage and small-scale industries found in the area include boat making at Kampung Weston (involving eight families, on an irregular basis as and when demand exists), fish processing (making prawn crackers, dried fish and prawns), etc. These activities are conducted on a casual basis, dependent on demand and the availability of supplies such as cheap fish and prawns.



## **3.2 Stakeholder Consultation and Participation Activities**

### **3.2.1 Consultation Process**

Subsequent to the Project Inception Workshop and first meeting of the Federal-level Project Steering Committee during 24 and 25 July 1997, the first direct meeting with Sabah State officials took place on 26 November that year. This meeting, organised by the Sabah Ministry of Tourism and the Environment (now Ministry of Culture, Environment and Tourism), included participants from the Forestry Department, Department of Natural Resources and WWF Malaysia (a local NGO), and was aimed at briefing State officials on the nature and objectives of the project. In addition, the meeting also discussed the identification and nomination (by the Sabah State Government) of a suitable site for the Project. This ultimately led to the State's nominating Klias Peninsula, and more specifically its peat swamp forest areas, as the project site.

A preliminary assessment of the Klias Peninsula was undertaken during 23 to 25 February 1998. This assessment, although brief, provided initial data for stakeholder identification and established first contact with local inhabitants. A second meeting was held with the State Coordinating Committee immediately thereafter, where initial impressions and the Project team's preliminary findings were presented to the State authorities.

Six officials from Sabah attended the Project Development Workshop on 21 and 22 April 1998. They represented the Ministry of Tourism and the Environment and the Departments of Wildlife, Natural Resources, Drainage and Irrigation and Forestry as well as the Beaufort District Office. During the Workshop these officials played a key role in refining and finalising the Klias Peninsula site component of the Project brief, prior to its adoption by the Steering Committee on 24 April and by the Sabah State Coordinating Committee on 12 May 1998.

The second phase of socio-economic and resource use assessment was conducted by Project staff during early September 1998. In addition to field research and assessments, meetings were also held with approximately twenty State and local officials and NGOs to gather information on the site area. Further analytical and research support was provided by WWF Malaysia, who are conducting a separate but related research project in the Klias Peninsula as part of the Sabah Biodiversity Conservation Project. Detailed socio-economic appraisals and in-depth surveys were conducted by WWF staff, resulting in the publication of a series of reports <sup>1</sup> which concisely summarise available data on the Klias area.

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<sup>1</sup> Primary sources for socio-economic and resource use appraisal are:

**Suriani Suratman** (1998); *Socio-Economic Appraisal of Selected Villages in the Klias Peninsula*, Sabah Biodiversity Conservation Project, Ministry of Culture, Environment and Tourism Sabah (MOCET) and Danish Co-operation for Environment and Development (DANCED),

**Grace Wong** (1998); *An Economic Study of Natural Resource Use & the Potential for Integrated Conservation and Development Projects (ICDPs) in the Klias Peninsular, Sabah*, Sabah Biodiversity Conservation Project, MOCET and DANCED and

**Justine Vaz** (1998); *Klias Peninsula: Assessment of Tourism Potential*, , Sabah Biodiversity Conservation Project, MOCET and DANCED

### 3.2.2 Stakeholder Feedback

A series of presentations was organised at major villages in the project area during the week of 1 to 6 February 1999. Staff undertaking this field mission attended a half-day briefing workshop in Kuala Lumpur on 26 January 1999, during which they were briefed on interview techniques, the key activities of the project and other relevant issues. The presentations in the project area were aimed at giving local stakeholders a concise and relevant summary of the Project's objectives and proposed activities, and afforded stakeholders most directly affected by the Project opportunities to provide their comments and provide feedback in a formal setting.

Informational pamphlets were prepared and distributed to attendees, which outlined the project's activities and provided basic information on the GEF and its objectives with this Project. The Project team attempted to highlight both the potentially negative effects of the Project's activities upon the local population (particularly in reduced access to PSF resources) as well as its beneficial outcomes e.g. in mitigating flooding and land degradation problems and in implementing strategies for alternative sustainable livelihoods.

The Project team conducted meetings in all key villages near the Project focal area, as well as a kickoff meeting with leaders from these villages. The schedule of meetings conducted is as follows:

Date	Village
2/2/99 11:40-14:00	Village Leaders Meeting, and Weston town
4/2/99 10:00-12:00	Kampung Pulai Manang and Kampung Bukau
4/2/99 13:15-14:15	Kampung Meraba
4/2/99 14:30-16:00	Kampung Inuman
4/2/99 16:20-18:00	Kampung Lingkungan

Meetings were also held on 3 February with various local government and native leaders, including the Assistant District Officer, the Native Chief [*Ketua Daerah*] and the Community Development Leader [*Pemimpin Kemajuan Rakyat*]. Project field staff briefed these leaders and officials on the current status of the Project, its proposed activities and the purpose of the current round of stakeholder participation consultations. The response received was entirely positive, and the native leaders in particular were very helpful and supportive.

### 3.2.3 Key Issues

Comments and responses received from local stakeholders have been compiled by the Project team, and are summarised below along with responses from the Project team where appropriate:

- Flooding represents the key concern for the villages of Pulau Manang and Bukau (which are closest to the Project focal area) as well as for Kampung Lingkungan. The incidence of flooding at Pulau Manang and Bukau has increased significantly over the past five years, which villagers attribute to logging and land clearing activities upstream along the Bukau and Api-Api rivers. Villagers are keen for this problem to be addressed urgently, and particularly welcome the Project's intention to evaluate hydrological problems and recommend solutions as one of its key activities.
- Land scarcity is also a key issue, particularly in villages such as Meraba, Inuman and Lingkungan, which feel hemmed-in by the Forest Reserves to the west and the Sabah Forest Industries and Tropical Fruits commercial plantations to the east. Villagers have made a number of applications for more land in recent years, including an application by Pulau Manang village for approximately 207 acres of village reserve land on the western bank of the Bukau river, in the area currently earmarked for the Klias Reserve extension. Villagers fear that what little land remains may be given away to outsiders, therefore the village communities feel compelled to apply for any land that is available, irrespective of current needs or ability to farm such land. Extensive discussions were held during all meetings concerning this issue, and villagers appear to be aware that opening up what little land remains does not represent a long-term solution to the problem of development and growth for their communities. Alternative livelihood options, such as aquaculture, eco-tourism and other non-land intensive activities therefore sparked strong interest. Villagers appear particularly keen on aquaculture and cage culture activities as well as the potential for small-scale tourism projects such as forest tours, homestay programmes [providing visitor accommodation in village homes] and bird-watching.
- Some reservations were still harboured concerning the proposed extension of Klias Reserve, particularly in view of the scarcity of land in the area. However villagers, particularly in Pulau Manang and Bukau, appear aware that opening up new land on the western bank of the Bukau river would be pointless if the flooding problem is not addressed. They also expressed a preference to explore new sources of income which can generate quicker returns compared with the planting of oil palm or fruit trees such as durian, which take between eight and ten years to bear fruit.
- Some village leaders pointed out that in order to ensure local support for the Project, the Forest Reserves in the area have to be seen to have benefits for the local community, and not just be set aside at the insistence of the Government or other outsiders. The Project intends to emphasise the benefits of the Reserves to the local community as a major part of the awareness-raising activities proposed.
- In recent years, Forestry Department field staff have been directed to prohibit villager access to the Kampung Hindian Forest Reserve, where previously villagers were allowed to harvest prawns and collect wood for personal use. Being one of the only local sources of wood for house- and boat-building, the

lack of access to this Reserve has been a significant hardship for the poorer local communities. The Reserve is understood to be still gazetted as a Class 4 Amenity Reserve [and therefore open for such uses] and therefore the villagers are very keen that the status of the Reserve and their use rights be clarified. The Project has undertaken [with the assistance of WWF Malaysia] to clarify this issue with State authorities.

- Village leaders have stressed that local support for the Project is dependent upon speedy implementation and a visible, effective local presence. As one villager termed it, the communities are impatient for the Project “to be seen, and not heard about only”. It is understood that there have been other projects and proposals previously which were presented and discussed at length but never materialised, and therefore the villagers are keen to see quick and visible implementation of the activities and objectives stated.
- Alternative livelihood options, particularly aquaculture and cage culture projects have repeatedly been suggested by local communities. There appears to be a keen awareness of the need to diversify local economic bases, and a willingness on the part of local communities to undertake new activities provided adequate support and technical assistance is provided. The Project intends to draw up and implement a strategy for alternative livelihoods, with implementation being financed through non-GEF resources, i.e., State Government, NGOs, etc.
- There is also great support and enthusiasm for eco-tourism as an alternative livelihood resource. Some local recreational tourism is already evident, particularly anglers from Weston, Beaufort and Kota Kinabalu who come to fish in the river during the dry season. Villagers sometimes provide boat rental and other services, but these anglers usually come self-equipped. Villagers are keen for assistance in preparing and marketing such eco-tourism and recreational activities as a secondary income source.

Following upon the series of meetings and discussions undertaken with Project field staff, the local staff of the Forestry Department have embarked upon regular monthly community meetings with all villages in the vicinity of the focal area Forest Reserves. As part of these regular meetings, Forestry Department staff have undertaken to further discuss and elaborate upon the proposed activities and objectives of the GEF project. Any comments or questions received from villagers concerning the Project will be recorded and conveyed to Project staff via the District Forestry Officer.

## **4.0 South-East Pahang Peat Swamp Forest (SEPPSF)**

### **4.1 *Socio-economics and Resource Use Overview***

#### **4.1.1 Methodology**

The SEPPSF project encompasses a vast area surrounded by a variety of population concentrations and economic activities. Comprehensive primary data collection was impossible given time and resource constraints, and thus baseline analysis of this site relied extensively on selective sampling and secondary sources. Fieldwork in the project area included interviews with potential stakeholders such as representatives of local populations, key Government coordinating agencies (e.g. Forestry Department and the South-East Pahang Development Corporation- DARA) and major economic interests including agricultural and aquacultural enterprises.

#### **4.1.2 Population**

The total human population of the site area (including Pekan and Muadzam Shah) is estimated to be approximately 65,000 people; consisting of three major categories;

- The (mainly Malay) population of the regional towns and coastal/ riverine villages.
- Orang Asli (Jakun Tribe) native inhabitants in resettlement schemes, traditional villages and forest fringe dwellings.
- The largely migrant working population in oil palm and other agricultural plantations.

##### **4.1.2.1 Regional Towns and Villages**

The main towns in the vicinity of the Site are Pekan in the north-east and Bandar Muadzam Shah in the south-west. In addition, villages such as Nenasi, Paloh Hinai, Kota Perdana, Lanjut and Padang Rumbia also contain significant population concentrations. Pekan and Bandar Muadzam Shah act as the primary regional centres; Pekan for the coastal and riverine strip stretching south to Lanjut and west to Paloh Hinai, and Muadzam Shah for the agricultural and logging enterprises located in the interior of south-east Pahang.

Pekan, Nenasi and Lanjut are also significant fishing communities, with large communities of ethnic Malay fishermen concentrated at the mouths of the Pahang, Bebar and Rompin rivers respectively. A scattered community of Malay villages consisting of rubber and padi smallholders, vegetable farmers, etc. stretches along the southern bank of the Pahang River, from Paloh Hinai in the west to Pekan town in the east; of these villages Padang Rumbia is the most notable.

Excluding Pekan, Muadzam Shah, Paloh Hinai, Kota Perdana and Lanjut, the total rural (non-Orang Asli) population of the Pekan District is approximately 10,500 people (DARA, 1997). Of these approximately 6,000 to 7,500 are estimated to reside within the site area. Economically, approximately 45% of this rural Malay population is engaged in farming, and 24% in fishing.

#### 4.1.2.2 Orang Asli Communities

The Orang Asli inhabitants of the Site area are all of the Jakun tribe; this tribe is found almost entirely within the Pekan and Rompin Districts of Pahang. The largest population concentration in the Site area is at the Runchang Resettlement Scheme (Rancangan Penempatan Semula - RPS) which is located to the west of the Pekan Forest Reserve. A number of large traditional Orang Asli villages (Kampung Tradisi) are also found within the Site area, including Kg. Sawah Batu, Kg. Api Larat, Kg. Simpai, Kg. Permatang Siput, Kg. Sena and Kg. Serun. Jakun tribespeople are also found within the Site area in smaller settlements or in isolated dwellings on the fringes of the forest and along rivers. These settlements are usually the poorest and most isolated of communities, which eke out a largely self-sufficient living from small-scale cultivation (fruits, yams, etc) as well as fishing and hunting of birds and small game. Most of these settlements have no access to public amenities, and little regular contact with the outside world.

The total Orang Asli population in the Site area is estimated at approximately 5,000 people. This total includes more than 1,800 people in RPS Runchang and populations of several hundred each in the larger Traditional Villages.

#### 4.1.2.3 Plantation Workers

The oil palm and other agricultural plantations in the Site area employ workforces, which are housed in quarters provided within the plantations. These workforces are almost entirely male, and consist largely of migrant workers from countries such as Indonesia and Bangladesh. Some local Malay and Orang Asli inhabitants are also employed in these plantations, often at supervisory, semi-skilled or clerical levels, and at the palm oil mills in the larger plantations. It is estimated that the total working population in these agricultural plantations is approximately 6,000 to 7,000 people.

The following table details the major population concentrations in the Site area, and their estimated populations:

LOCATION	DESCRIPTION	EST'D POP'N	PRIMARY ECONOMIC ACTIVITY
Pekan	Largest town in the Site vicinity, located at the north-eastern tip of the Site area, near the mouth of Sungai Pahang	20,000	Primary regional centre, fishing port, Royal Town of the Pahang Sultanate, automotive industries centre (north of Pekan town).
Bandar Muadzam Shah	Headquarters of the DARA Special Development Area, located south-west of the Site area	17,298	Headquarters of the DARA Special Development Area, regional centre for the DARA region, administrative, service and support centre for agricultural activities.

## ANNEX 4: STAKEHOLDER PARTICIPATION

Nenasi	Large fishing village located at the mouth of Sungai Bebar, to the east of the Nenasi F.R.	2,000	Major coastal fishing centre, some fish processing and wholesaling services.
Paloh Hinai	Traditional Malay riverside village, and local centre for the north-western region of the Site.	3,959	Minor local service, support and commercial centre for agricultural plantations in the vicinity.
Kota Perdana	Agricultural local centre, located west of Nenasi and south-west of Kedondong F.R.	2,406	Agricultural support services, minor local commercial centre.
Lanjut	Fishing village and tourist centre, located south-east of the Site area at the mouth of Sg. Rompin	1,200	Fishing village at the mouth of Sg. Rompin; tourist accommodation centre (beach resorts and hotels), ferry port for services to Pulau Tioman.
RPS Runchang	Orang Asli resettlement scheme, located south-west of Pekan F.R.	1,840	Largest Orang Asli settlement in the site area; primary school, health clinic, local JHEOA office, agricultural activities.
Kg. Simpai	Traditional Orang Asli village	552	RISDA oil palm cooperative, watermelon planting, some rattan collection and hunting, some plantation employment.
Api Larat	Traditional Orang Asli village	389	Small-scale agriculture, oil palm being developed, significant external employment (out-migration).
Kg. Sawah Batu	Traditional Orang Asli village	542	Fruit orchards, some oil palm plantation and mill employment.
Kg. Sena	Orang Asli Village	143	Fruit orchards, hunting and fishing, rattan and reed handicrafts, significant external employment.
Kg. Serun	Orang Asli Village	249	Fruit orchards, hunting and fishing, rattan and reed handicrafts, significant external employment.
Kg. Permatang Siput		247	Hunting, fishing, some rattan collection.

### 4.1.3 Resource Use

At present there are no major economic activities within the Forest Reserves, aside from minor hunting, rattan collection and other daily interactions by a small number of Orang Asli villagers living in the vicinity. Most economic activity in the Site area occurs on the fringes of the Forest Reserves; these include oil palm and other agricultural cultivation along the western and southern boundaries of the Site, logging in the statelands fringing the Reserves and aquaculture cultivation and fishing along the eastern coastal strip.

#### 4.1.3.1 Agriculture

Commercial agriculture is the primary economic activity in the Site area. The bulk of the statelands surrounding the four Forest Reserves in the Site have been converted into oil palm, rubber and other mono-culture plantations over the past thirty years. These plantations are a mix of private and public sector projects. According to data from DARA, there are more than 160 agricultural estates in the

South-East Pahang region, including approximately 50 in the vicinity of the Site. The primary agricultural products in the region are palm oil and rubber. Cocoa, lowland tea and various types of fruits and vegetables are also grown, and DARA has developed some beef cattle ranches through its Darabif and Pahangbif subsidiaries.

### 4.1.3.2 Aquaculture

Aquaculture activities in the Site area are concentrated along the eastern boundary, adjacent to the coast and along the Pekan-Rompin coastal road. These activities are dominated by the Song Cheng Enterprises aquaculture operation, which is the largest commercial eel farm in the world in addition to producing tiger prawns, freshwater prawns, soft-shell turtles and various types of freshwater fish for export to the Far East. The Song Cheng operation covers more than 2,000 hectares, stretching for 18km along the Pekan-Rompin road from Sungai Miang in the north to Tanjung Batu in the south. According to information from the State Economic Development Corporation (PKNP), which leases the land to Song Cheng, an additional 2,000 hectares of land has been earmarked for the future expansion of this enterprise, which is a major employer (1,300 workers) and revenue generator (RM100 million turnover) for the region. Other smaller aquaculture farms have been developed in the vicinity of Song Cheng, at Nenasi and Sg. Miang, under the 'umbrella' development concept, where small-scale local entrepreneurs are given training and technical assistance by Song Cheng and the State Government to venture into commercial aquaculture on a cooperative basis.

### 4.1.3.3 Logging

Logging is one of the oldest major economic activities conducted in the Site area. Logging concessions are given out and supervised by the Forestry Department. In general, areas that are to be developed for agriculture are first clear-felled; most of the plantations in the Site area were cleared in this manner. The statelands surrounding the Forest Reserves in the Site area currently being logged, with major activity taking place to the north-east of the Pekan reserve.

Logging activities are undertaken by private contractors hired by the concession-holders. These contractors generally bring in their own logging crews, and thus opportunities for employment for local people are fairly limited. However some employment in logging companies has been reported by Orang Asli villages in Kg. Api Larat and Kg. Simpai.

### 4.1.3.4 Fishing

Fishing activities in the Site area consist of two broad types; commercial marine fishing from villages along the sea coast, and small-scale riverine fishing for personal consumption and local sale. Commercial fisheries in villages such as Nenasi, Lanjut and Pekan concentrate on coastal operations using small motorised boats (sampan). This activity is conducted entirely by traditional Malay fishermen, who sell their catch to middlemen for shipment to larger towns such as Kuantan, Johor Bahru and Kuala Lumpur. Smaller-scale fishing occurs along the rivers in the Site area, e.g. Sg. Bebar, Sg. Merchang and Sg. Rompin.



These fishermen are largely Orang Asli from nearby villages, who fish for personal consumption or sale to other villagers in the local area. Fishing takes place using small motorised or oar-driven sampans, and fishing rafts on the larger rivers. Some small-scale fishing is also reported within the Forest Reserves, where peat-swamp fish varieties are found.

#### 4.1.3.5 Hunting and NTFP collection

Rattan collection is one of the primary forms of interaction between the Orang Asli inhabitants and the Forest Reserves in the Site area. In recent years the available supply of rattan has become smaller, in part due to the concentration of populations in resettlement schemes and larger traditional villages. Since most collection takes place in the immediate vicinity of the villages the supply of rattan readily available to the larger villages has been quickly exhausted. Villagers generally do not undertake overnight or extended trips to collect rattan, and thus it is probable that stocks in the more isolated parts of the Reserves are still untapped.

Other non-timber forest products such as mengkuang reeds (for weaving into mats, baskets, etc.), damar and forest fruits, shoots and other food products are also collected, again in the immediate vicinity of the villages rather than from extended forays into the forest. One villager in RPS Runchang has established a small business producing furniture and handicrafts made from naturally harvested roots, buttresses, rubber seed casings and other forest products.

Hunting in the site area takes two distinct forms; small-scale hunting of birds and small animals by the Orang Asli for personal consumption, and sport hunting of larger game (particularly wild boar) by recreational hunters from outside the Site area. Sport hunting activities are believed to be quite extensive in statelands, particularly along logging trails and other access routes. Hunting in the site itself is more limited, due to the difficulty in accessing the Forest Reserves. Sport hunting attracts hunters from as far as Kuala Lumpur and Singapore, particularly on weekends and during holiday periods.

## ***4.2 Stakeholder Consultation and Participation Activities***

### **4.2.1 Consultation Process**

Following the Project Inception Workshop on 24/25 July 1997 and the first two meetings of the Project Steering Committee on 25 July and 8 December, a briefing was held for the Pahang State Consultative Committee (comprising approximately fifteen State and local officials) on 12 February 1998. This briefing served to outline the nature and objectives of the project, to elicit initial responses and gather available information from the various Government agencies that were represented. The meeting also served to establish initial contact with key representatives of the various agencies and Government bodies whose assistance would be required both in preparing the Project Brief as well as in the operation of the Project itself.

Project staff and consultants conducted preliminary assessment of the SEPPSF site during the period 16 to 19 March 1998. This assessment included meetings with private sector stakeholders (oil palm plantations in the surrounding area) as well as officials from the Forestry Department and other relevant agencies. Some contact was established with the local population during the assessment.

The Preliminary assessment was followed by a second presentation to the State Consultative Committee, which detailed initial findings and tentative approaches. Upon completion of the draft brief a third meeting was held with the State Consultative Committee for endorsement of the draft brief and final confirmation of Pahang State's willingness to participate in the Project.

The second stage of the stakeholder consultation process (detailed stakeholder identification, socio-economic evaluation and resource use analysis) was conducted during the period of 8 to 19 September 1998. Fieldwork was conducted with the assistance of the State Forestry Office, and included a review of socio-economic activity in the surrounding area as well as visits to a number of *Orang Asli* settlements.

Interviews were conducted with residents and headmen of most major *Orang Asli* villages bordering the project area. Each interview averaged approximately one hour, and interviews were usually conducted in the presence of village leaders and other male and female residents. Questions asked covered issues such as total population and village demographics, employment and major income sources, interactions with the Forest Reserve areas (resource use patterns), settlement activity and resettlement patterns, alternative livelihood options and preferences and preliminary reactions to the Project and its objectives.

One key issue that was determined during these interviews (as well as in information gathered from local officials) is that *Orang Asli* interaction with the Forest Reserve areas is extremely limited. Accessibility is very low, and as a consequence hunting, fishing and NTFP collection activities are not generally undertaken further than one mile (1.6km) into the peat swamp forests.

The Government's resettlement and community development programmes have also drastically reduced dependence upon the PSF areas as sources of food or other materials, and the consolidation of communities into RPS resettlement schemes and large Traditional Villages (to facilitate the provision of public amenities, amongst others) has reduced access to traditional hunting and harvesting areas. Therefore the impact of the Project's activities upon local communities in Pahang will be marginal, and stakeholders interviewed showed a corresponding lack of interest in the activities proposed by the Project.

*Orang Asli* villages and resettlement schemes visited during this phase of fieldwork were:

- Kampung Permatang Pasir
- Kampung Api Larat
- Kampung Sawah Batu

- Kampung Simpai
- RPS Runchang Resettlement Scheme

In addition, an interview was also conducted with *Orang Asli* from small (unnamed) forest-fringe dwellings on the south-western periphery of the PSF area, to account for the segment of the community which has declined to participate in the Government's resettlement programme, and which is still living in isolated individual settlements.

### 4.2.2 Stakeholder Feedback

The results of the socio-economic and resource use surveys, along with initial interviews with local communities, indicated that local stakeholder involvement with the Site area is extremely marginal. Socio-economic development trends in the *Orang Asli* community show strong movement away from dependence upon forest resources towards settled agricultural activities (communal oil palm cultivation, paid labour in plantations, etc.) The Project's objectives and proposed activities elicited little enthusiasm, other than at the prospect of employment in logging companies if the area was opened for timber extraction.

Nevertheless the Project undertook a series of presentation and feedback sessions on the proposed activities with *Orang Asli* leaders and community members at three key settlements closest to the PSF areas; RPS Runchang, Kampung Api Larat and Kampung Simpai. These discussions were conducted with the assistance of the Orang Asli Affairs Department [Jabatan Hal Ehwal Orang Asli – JHEOA]. Informational pamphlets detailing the Project's objectives and proposed activities were also prepared and distributed to community representatives from the larger *Orang Asli* villages and settlements. Feedback received from participants during the presentation sessions has been compiled and detailed below:

### 4.2.3 Key Issues

As mentioned above, the communities' interaction with the PSF areas of the four Forest Reserves is quite limited, and therefore there appeared to be little concern with the proposed activities to be undertaken in the Forest Reserve areas. Participants welcomed any efforts undertaken to overcome the problem of forest fires and drought and in general were supportive of conservation and sustainability objectives. Villagers were also keen to seek employment in logging projects once these have commenced. Many villagers, particularly younger men, have previously worked in logging companies, both locally and interstate. There appeared to still be some confusion concerning the difference between sustainable logging practices as proposed by the Project and conventional logging activities currently carried out in the vicinity, however the key differences were clarified by Project staff. Further information concerning sustainable logging practices will be included in the awareness-raising activities proposed in the Project.

Far greater interest was shown in potential alternative livelihood activities. Participants in all villages focused most of their attention on possible new income sources and many potential projects were suggested, including aquaculture and freshwater fish farming, harvesting and sale of forest produce (including rattan, fruits, berries and roots) and the development of fishing resources (including ornamental aquarium fish caught during the dry season). Many of the activities suggested were outside the scope of the Project's activities, but issues relating to NTFP utilisation (including PSF fish stocks) and local community resource use requirements will be addressed in drawing up action and management plans for the Forest Reserves. It should be noted that, given the fact that populations at Pahang are relatively uninvolved with the actual site, less emphasis may be given to providing alternative sustainable livelihoods than at other project sites.

Some villagers, particularly younger, better-educated participants, expressed some reservations concerning the objectives and activities of the Project. In particular there was a fear that the Project's activities might impinge upon lands reserved for the *Orang Asli* communities. JHEOA staff who were present reassured participants that none of the Project's activities are intended or would be allowed to spill over onto lands already gazetted for *Orang Asli* use.

Some participants were also skeptical that the Project's stated intention to ensure local involvement would actually be carried through. Project staff confirmed that it was the Project's intention to encourage local involvement wherever possible, subject to there being local parties or individuals willing to participate. Wherever feasible priority and the right of first refusal would be given to local inhabitants before Project activities [especially in the development of NTFP resources] would be opened-up to external participation.

Following on from the stakeholder consultations and open discussions which have been held, the Project has gained the assistance of the JHEOA to further explain and gather feedback on the Project's proposed activities and objectives, particularly amongst the *Orang Asli* communities living closest to the Project area. All comments and feedback received will be noted and compiled by the JHEOA and forwarded to the Project via the Deputy Director of JHEOA Pahang, who was present at all community discussions.

## **5. Federal-level Consultations**

At the Federal level, the Project's consultations were focused upon Federal Government ministries and agencies, private-sector representative associations such as the Malaysian Timber Council, representatives of the palm oil industry, tourism bodies and NGOs such as the World-Wide Fund for Nature (WWF) and Malaysian Nature Society. Federal-level consultations centered around the national-level Project Steering Committee, which comprises representatives from the Economic Planning Unit, Primary Industries Ministry, Ministry of Culture, Arts and Tourism, Federal Forestry Department, Drainage and Irrigation Department and each of the participating State Governments. An environmental NGO, Wetlands International Asia-Pacific, was also represented.

The Project Inception Workshop was held in Kuala Lumpur on the 24 and 25 of July 1997. A total of 73 participants attended, from a variety of Federal and State Government agencies as well as scientists and technical experts, industry representative bodies and NGOs. The Inception Workshop concentrated upon the formulation of a set of criteria for identification of project sites, based upon information presented by the Project team and invited experts. The Workshop also afforded the Project team the opportunity to learn about the key issues facing managers of PSF areas.

Two meetings of the Project's Federal-level Steering Committee were held in 1997, on 25 July and 8 December. These meetings concentrated upon the nomination of potential sites by the respective State Governments, and resulted in the eventual selection of the sites under study.

A Project Development Workshop was held on 21 and 22 April 1998 in Kuala Lumpur, to review the project brief that was in preparation and to discuss, amend and approve the various site components. The Workshop had a total of approximately fifty participants, being representatives of State and Federal agencies such as Forestry, Drainage and Irrigation, Economic Planning Units, Agriculture and Orang Asli Affairs Departments and Land and National Parks Offices.

Representatives were also invited from key technical agencies such as the Forest Research Institute of Malaysia (FRIM), the National Hydraulic Research Institute of Malaysia (NAHRIM) and from environmental NGOs such as the Worldwide Fund for Nature, the Malaysian Wetlands Foundation and the Malaysian Nature Society. Several specialist technical consultants such as ecologists and environmental specialists were also included in the workshop to provide technical inputs.

After being reviewed and finalised during the Project Development Workshop, the project brief was then adopted by the Project Steering Committee at a meeting on 24 April 1998, and forwarded to the GEF. Following further technical analysis and revision the brief was re-endorsed at a Steering Committee meeting on 8 November.

#### **ANNEX 4: STAKEHOLDER PARTICIPATION**

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The range of meetings, workshops and direct consultations undertaken at the Federal level has generated strong support for the Project from the Malaysian Government, particularly from key ministries such as the Ministry of Science, Technology and the Environment and the Ministry of Primary Industries. In addition, valuable input has been received from Government agencies such as the Forestry Department and JHEOA and from NGOs and technical organisations such as FRIM. This spectrum of cooperation and support has ensured that the project is widely understood and supported by key stakeholders across the board.

## **6. Continuing Involvement**

Stakeholder consultation is seen as a continuous, adaptive process, not a task with predetermined approaches and defined endpoints. In addition to efforts undertaken to date, a range of stakeholder consultation and involvement processes have also been envisaged for the Project proper. As discussed in preceding sections, interim feedback and participation mechanisms have already been established at each of the three sites via key Government agencies, i.e. the National Parks and Wildlife Office at Loagan Bunut, the Forestry Department at Klias and JHEOA in Pahang.

A high degree of flexibility has been built into stakeholder involvement plans for the Project, to ensure that the Project is able to adapt and evolve its consultative and participatory strategies in accordance with current Participatory Project Management (PPM) best practices. The most suitable consultation tools and participation processes to be used at each site and for the Project overall have not been set in stone, though certain mechanisms (e.g. community participation plans, awareness campaigns and detailed participatory appraisals) have already been included in the Project's proposed activities.

One key stakeholder participation mechanism being planned is the use of community action groups and community liaisons as intermediaries between the Project and key stakeholder constituencies, particularly as part of the stakeholder participation plan to be developed at Loagan Bunut. Amongst the key constituencies being targeted are women, youths (18 to 35 years) and schoolchildren. Such groups will be established at village level, with elected or volunteer liaisons to act as Project focal points and representatives at site-level Project representative committees. Within the scope of the proposed awareness campaigns, support will be provided for training and materials for these liaisons to serve as information disseminators and conservation advocates in their local communities.

Local groups and interested individuals will also be engaged as enumerators and field staff for the ecological and scientific analysis work to be undertaken by the Project. In addition to enhancing local involvement and ownership of the Project, such involvement will enable the Project to provide small-scale employment opportunities and local income generation in the Project areas. Furthermore local inhabitants will gain additional skills and a greater awareness of the ecological significance and importance of the Project areas.

## ANNEX 5 INCREMENTAL COST ANALYSIS

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### 1. Broad Development Goals

Malaysia's development policy is exemplified by its Vision 2020 programme, through which it aims to achieve developed country status by the Year 2020. To this end, and by combining a thriving private sector with Government support for key projects, Malaysia has achieved rapid rates of growth in recent years. However, in 1997 the country became caught up in South-east Asia's environmental, financial and economic crises, which together have constituted a major setback for many of its targets and specific projects. Development policy is thus currently in a state of adjustment, with trends including expanding reliance on export sectors– including resource-based industries such as timber and agricultural products (palm oil)– to improve balance of payments and to take advantage of the country's increasingly competitive exchange rate.

In recent years, Malaysia has begun to focus more closely on ensuring that its development policies and trends are in line with principles of sustainable development and global environmental protection. For example, the National Forestry Policy (NFP), first endorsed in 1978, was revised substantially in 1992 to reflect the importance of conserving biological diversity, sustainable use of genetic resources and the role of local communities in forest management. In 1998, the Cabinet adopted a National Policy and Action Plan on Biodiversity Conservation. A national policy on Wetlands Conservation and Use is currently being formulated.

Internationally, Malaysia has been actively involved– often as a de-facto spokesman for developing country concerns– in issues relating to environment and development. The country is a signatory to key international environmental conventions and other agreements including, *inter alia*, Agenda 21, the Biodiversity Convention and the Ramsar Convention. In the area of forestry, Malaysia has adopted the targets of the International Tropical Timber Organization (ITTO), which aim to ensure sustainable forest management by the year 2000.

### 2. Baseline

Malaysia possesses more than one million ha of tropical peat swamp forest (PSF) areas containing abundant stores of globally significant species, representative ecosystems and diverse gene pools. However, Malaysia's PSF ecosystems, and the globally significant biodiversity that they house, are generally threatened throughout their range. Species are being lost, genetic diversity eroded and representative ecosystems face elimination. The current level of efforts to address these threats is insufficient to ensure either sustainable use or conservation of globally significant biodiversity. Current trends, if left unchecked, are therefore likely before long to lead to substantial additional losses of globally significant biodiversity. This section summarises the threats facing globally significant PSF biodiversity and their underlying causes as well as relevant baseline activities and why these are seen as insufficient.

#### 2.1. Threats and Underlying Causes

Recent years have seen widespread conversion of Malaysia's PSFs, primarily for single sector uses involving agriculture. Some conversion schemes, particularly where done on shallow peat soils, may prove successful and sustainable from a broad perspective, i.e., where sustainability is defined as consistent with a reasonable degree of transformation of natural capital into



financial capital. Other agricultural conversion schemes are more difficult to justify as sustainable. These include projects undertaken on deeper peat soils, which at best require expensive and careful management, particularly of the water table. Where such schemes fail, and the peat soil dries, the result is often little better than wasteland. Unfortunately, in neither of these examples of agricultural conversion is any significant effort made to conserve globally significant biodiversity, which, along with other formerly sustainable ecosystem services, is invariably lost in the process. Peat swamp dependent species, many of which have fairly restricted ranges, face a high risk of extinction in such cases. The issue of how much PSF may ultimately be converted is a particularly important one for the state of Sarawak, where the large majority of Malaysia's remaining PSF area is found.

In addition to areas where PSF is converted and its biodiversity essentially wiped out, other less dramatic examples of biological and ecological erosion are abundant. For example, a major threat to PSF biodiversity comes from destructive forest harvesting methods, including the use of 'traxcavators.' The results can be seen in the peat swamp forests of Selangor state, where no significant area remains unscathed. In some cases, logged forests will have difficulty regenerating. In all cases, such forests will regenerate with a very different species composition; if no areas with representative ecosystems are left unlogged, such ecosystems may then be lost at the global level, i.e., there may be no similar, substitute areas. Selective logging is therefore potentially sustainable, depending on the methods used, but will in all cases lead to alterations in biodiversity and globally significant losses therein if other representative ecosystems are not fully protected. The state of Pahang is currently facing the difficult issue of how to ensure that selective logging of virgin PSF may take place in a sustainable, biodiversity-friendly manner. Illegal logging, which is a problem in many areas, poses similar threats.

Besides logging and conversion, various other threats are combining to reduce and in some cases eliminate the global environmental values of PSF areas. For example, agricultural and other developments on peatlands adjacent to remaining PSF, if not carefully managed, may lead to drainage of PSF areas and resulting increased risk of fire. Such problems are now facing PSF managers in the states of Pahang and Sabah. Hunting and encroachment – the latter also a fire hazard – have similarly negative impacts on global values, as populations of key species drop and risks of local extirpation increase.

## **2.2. Baseline Activities**

Baseline efforts are clearly being made to address the above-described underlying causes. However, these are largely insufficient to successfully meet the challenge of maintaining global biodiversity values and are in many cases inadequate to ensure sustainable development. This section presents an overview of these baseline efforts (see also section 2 above). This and the following sections are organised according to the six issue areas for which project outputs have been defined. Estimated baseline costs in each of these areas are presented in the incremental cost matrix below.

(i) *Information and Analysis:* These ecosystems are poorly understood, and adequate baseline information on ecosystem functioning is rarely collected. Hydrological connections between reserves and adjacent cleared peatlands are poorly recognised. Most PSF reserves and national parks are subject only to occasional monitoring by Forestry Department personnel, who are mainly looking for signs of illegal encroachment. Resource inventories may be conducted for production forest reserves, but these focus solely on commercially important tree species. Information on local communities and their uses of the forest is limited and often anecdotal,

#### ANNEX 4: STAKEHOLDER PARTICIPATION

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e.g., they are often blamed for causing fires. Lack of adequate information makes any attempt at planning impractical.

(ii) *Lack of Management Planning:* Two of the project site components are in areas where logging is not permitted, including a National Park and protected forest reserves. None of these sites has baseline activities in the area of management planning for conservation, recreation, etc. In the case of a third site, South-east Pahang PSF, baseline activities include the preparation of guidelines for sustainable management, including potential logging. However, these fall short of the preparation of an actual management plan.

(iii) *Implementation / Demonstration:* The goal of improving management of a particular type of ecosystem can be greatly supported by the existence of a well managed and studied area which can serve as a demonstration to both managers and policy makers of the potential benefits of sustainable management.<sup>2</sup> One important element of such a demonstration should be ensuring the effective participation and involvement of local peoples. The lack of any such area in the case of PSF is a major impediment to conservation and sustainable use, as there is no way for managers to benefit from seeing a sustainable and 'global biodiversity-friendly' approach in action. One baseline attempt to create such a demonstration site is the establishment of Paya Indah, a wetland complex near Kuala Lumpur. However, this site faces a rather unique set of threats and issues which suggest that, while important particularly from the point of view of awareness, its demonstration effect will be somewhat limited.

(iv) *Inter-sectoral Coordination and Networks:* Co-ordination of environment and development in Malaysia is accomplished through State Planning Units (SPUs). Baseline activities here involve that portion of SPU work which relates to planning and co-ordination of developments with potential implications for PSF areas. These co-ordinating efforts have proven inadequate to ensure the protection of globally significant PSF biodiversity or sustainable use. In the baseline scenario, conflicting aims of State Departments of Forestry, Agriculture and Drainage and Irrigation will therefore continue to produce sub-optimal levels of national and global benefits from PSF resources.

(v) *Awareness:* Among the most critical underlying causes leading to degradation of PSF and other forest and/or wetland ecosystems is the poor understanding of their various values, including non-monetary ones. Limited sums are spent in this area by State Departments of Forestry, Environment, NGOs and industry groups. Of these sums, only a small percentage is focused on peat swamp forest ecosystems. Overall, these efforts create little momentum towards either conservation or sustainable use, nor do they do enough to dispel the image of wetlands, including PSFs, as wastelands.

(vi) *Technical Capacities:* PSF ecosystems are poorly understood even by experts. Where effective methods of managing them are known, these are not widely understood by officials responsible for management. Baseline activities include training in overall forest management and hydrological issues at relevant state and federal levels, some of which is supported by

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<sup>2</sup> One such area in Malaysia is Matang, which is internationally renowned as an example of sustainable management of mangrove ecosystems.

bilateral donors. However, little of this work focuses directly on management of PSF ecosystems.

### **3. Global Environmental Objective**

The primary objective of this project is to develop and implement plans and to encourage processes that will ensure the conservation and sustainable use of globally significant genetic, species and ecosystem diversity within Malaysia's peat swamp forests. It aims to accomplish these tasks directly at three sites as well as indirectly through impacts on policies, processes and perceptions throughout the country. PSFs are a priority conservation area identified under the Ramsar Convention and under Malaysia's National Biodiversity Policy. Their conservation and sustainable use will therefore help the country to meet its commitments under the Convention on Biodiversity. Project activities and outputs conform closely to those specified under GEF's Operational Programme Number 3 for forest ecosystems.

### **4. Alternative Project**

The alternative project includes the above-described baseline activities *plus* incremental ones. These incremental activities (see Annexes II and VI) will support measures aimed at conserving globally significant biodiversity, as well as efforts aimed at ensuring sustainable use of PSF resources— the latter to be addressed largely through co-financing.<sup>3</sup> The aim is to transform the above-described components of the baseline scenario as follows:

(i) *Well-functioning monitoring, data collection and information management systems:* Data-gathering technologies, including a demonstration system in Sabah relying on GIS and spectro-grammetry technology, will be used for mapping and biodiversity analysis. Better data will emerge regarding endangered and threatened species. The resulting ecological data and assessments will be available for improved decision-making and management planning. In addition, information will be collected through PRA technique concerning the relationship of local communities to PSF areas. Substantial global and national benefits should result over the current baseline situation wherein little information on PSF ecosystems is collected, analysed or acted upon.

(ii) *Management Plans:* Building on the newly available information generated through the above output, this output will ensure the preparation of strategies or action plans in specific areas such as threatened species protection, fire prevention, ecotourism, control of hunting and encroachment, etc. These action plans will then be harmonized into an integrated management plan for each site. This process will highlight the benefits to be gained from a well-planned approach to management of PSF areas. It will also help to ensure that global considerations are given due weight in pilot and other activities to be undertaken at each site. While not completely separable, action plans aimed at, for example, globally threatened species will generate primarily global benefits while those aimed, for example, at managing water use will generate mainly national benefits.

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<sup>3</sup> Exceptions being in cases where specific barriers are preventing sustainable development from taking place. Here, GEF funding may be made available for limited demonstrations aimed at removing such barriers.

## ANNEX 4: STAKEHOLDER PARTICIPATION

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(iii) *Implementation / Demonstration:* Creating sustainable examples of PSF sites which demonstrate globally significant and other biodiversity being conserved and PSF resources being sustainably used will be an important objective of the project. This component will involve on-the-ground efforts at each site, with corresponding national and global benefits at the site and for other areas through a demonstration effect. In the area of biodiversity conservation, equipment and support for management activities such as boundary demarcation will also be provided. Together, these efforts will ensure real site-level changes and improvements in habitat quality, and thus maintained or increased levels of biodiversity (national and global benefits). Efforts will be made to enlist the support and co-operation of local peoples living in buffer zone areas around the PSFs. Reduced levels of illegal hunting, logging and encroachment are expected as a result (national and global benefits), as well as increased and more sustainable levels of income for local people (national benefit).

(iv) *Co-ordinated Government Agencies:* In order to enhance the potentially key role of inter-sectoral co-ordination, the project will support the establishment and technical work of peatland management committees. The resulting decline in inter-agency conflict will lead to more efficient and sustainable use of PSF resources, e.g., water, timber, etc. (national benefit) while also decreasing the risks facing globally significant biodiversity (global benefit).

(v) *Enhanced Awareness:* Awareness of the national and global values generated by PSFs and associated wetland ecosystems will be increased. Target groups will include local communities, decision-makers, managers and the general public. Increased levels of awareness will generate both global and national benefits by helping to ensure that adequate importance is given to Malaysia's biodiversity (globally significant and otherwise) and that greater efforts are made to ensure its conservation and sustainable use.

(vi) *Strengthened Technical Capacities:* Institutional and human capacities to conserve and sustainably manage biological diversity in PSFs and associated wetland ecosystems will be strengthened. Training and educational curricula will be made available for this purpose. Combined with baseline efforts, these will ensure that forest reserves and parks containing globally significant PSF biodiversity are managed by knowledgeable staff. Again, both global and national benefits will ensue.

## 5. Scope of Analysis

In geographical terms, the systems boundary for the assessment includes areas of PSF and associated wetland ecosystems in three Malaysian states. Baseline figures show the estimated overall costs associated with management of all PSF areas in the three participating states.<sup>4</sup> The analysis captures the expenditure changes that would occur, relative to the baseline situation, within six areas of intervention. Changes within each area of intervention involve the creation of global and national benefits and constitute a project output.

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<sup>4</sup> The difference between whether the systems boundary includes all sites within the three states or whether it is for the project sites alone is only significant in the case of Sarawak, as the other states have little or no additional PSF area beyond the project site. Nevertheless, since the project aims to stimulate change throughout these states in particular, it was felt appropriate to use this broader definition. Likewise, baseline figures for the national component, by definition, refer to efforts throughout Malaysia, e.g., in the area of research, awareness, etc., although care has been taken to avoid double-counting of State expenditures.

## **6. Costs**

Baseline expenditures within the systems boundary of the six thematic areas defined by the outputs are estimated at US\$15.130 million. These are the estimated costs of all programmes and management activities in PSF areas throughout the three participating states that would have taken place in the absence of a GEF project, as well as relevant additional national-level expenditures.

Including the above baseline expenditures, the total cost of the alternative project necessary to ensure sustainable development and the conservation of globally significant biodiversity is US\$28.099 million. The total additional, or *incremental cost*, which is the difference between the baseline and the alternative project, is therefore US\$12.969 million.

The total amount of the GEF grant being requested to support the creation of global benefits under the alternative project is US\$5.985 million. This is in addition to the US\$0.319 million that was provided as an initial PDF grant to formulate the project. The sub-total of GEF financing is thus US\$6.304 million.

Malaysian Government financing for incremental components of the alternative project totals approximately US\$3.550 million (based on an official UN exchange rate for October 1998 of RM 3.8: US\$1). This includes an estimated RM 9.5 million (US\$2.5 million) for the development of national park infrastructure at Loagan Bunut National Park. An additional estimated US\$3.115 million is expected to be available as co-financing from DANCED and the Netherlands

## ANNEX 5: PROJECT BRIEF INCREMENTAL COST ANALYSIS

7. Incremental Costs Summary Matrix					
	Baseline (B) (existing environmental management)	SD Baseline (SDB) (improved environmental management)	Alternative (A) (additional biodiversity conservation measures)	Increment 1 (SDB-B) (leveraged for sustainable development)	Increment 2 (A-SDB)
Global Benefits	<ul style="list-style-type: none"> <li>• Low levels of information, planning, awareness and capacities lead to protected areas which aren't sufficiently 'protective'</li> <li>• Globally significant species and representative habitats are lost due to overzealous conversion schemes</li> <li>• Species and habitats threatened by drainage and fire</li> <li>• Increased frequency of fires release stored CO<sub>2</sub> and inhibit carbon sequestration value</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness, capacities and management tools are strengthened</li> <li>• Examples of sustainable and benefit-generating PSF areas are demonstrated, leading to conservation of marginal lands</li> <li>• Threats are addressed through training, awareness, planning, etc.</li> <li>• Water management practices which create increased fire risk are improved</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Risks to globally significant bio-diversity are reduced</li> <li>• Risks of species extinction are reduced and habitats are conserved</li> <li>• Risks to globally significant bio-diversity sharply reduced</li> <li>• CO<sub>2</sub> sequestration values are maintained and emissions avoided</li> </ul>
Domestic Benefits	<ul style="list-style-type: none"> <li>• Ecosystem services and extractive potential threatened by drainage, fire hazard, unsustainable harvesting, etc.</li> <li>• Ecotourism potential not realized</li> <li>• High short-term profits earned from 'mining' of PSF timber resources</li> <li>• Existence and bequest values threatened due to tenuous state of many PSF ecosystems</li> <li>• Consumptive use values from hunting and fishing exist, but are liable to fall quickly as wildlife populations collapse</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced risk of fire and more stable hydrological conditions in PSF areas</li> <li>• Strategies and methods of using PSF areas as tourist destinations are developed</li> <li>• Extraction of PSF resources is made more sustainable, with benefits flow smoothed out over time</li> <li>• Risks to unique ecosystems are reduced</li> <li>• Hunting and fishing are controlled in accordance with state regulations and carrying capacities</li> </ul>		<ul style="list-style-type: none"> <li>• Increased flow of long-term benefits from ecosystem services and resource extraction</li> <li>• Increased tourist revenues and consumer surplus from domestic tourists</li> <li>• Lower timber revenues in short term, but with NPV roughly equivalent over time (not quantified)</li> <li>• Increased existence and bequest values domestically</li> <li>• Consumptive use values in some cases replaced by non-consumptive ones (e.g. viewing, photography)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

## ANNEX 5: PROJECT BRIEF INCREMENTAL COST ANALYSIS

7. Incremental Costs Summary Matrix								
	Baseline (B) (existing environmental management)	SD Baseline (SDB) (improved environmental management)	Alternative (A) (additional biodiversity conservation measures)	Increment 1 (SDB-B) (leveraged for sustainable development)		Increment 2 (A-SDB)		
<b>Costs/ Activities</b>								
Output 1: Information / Analysis	Limited information on peat swamp forest ecology is available for use by decision-makers and planners  States 905,000 Federal 1,150,000  <i>TOTAL</i> 2,055,000	Additional information available re. hydrology, environmental conditions, commercial species  States 955,000 Federal 1,750,000 DANCED 630,000  <i>TOTAL</i> 3,335,000	Ecological assessment of sites, environmental monitoring and biodiversity overlays provide up-to-date information for improved decision-making  States 955,000 Federal 1,750,000 DANCED 630,000 GEF 660,000  <i>TOTAL</i> 3,995,000	States DANCED Federal	50,000 630,000 600,000	GEF	660,000	
				<i>TOTAL</i>	1,280,000	<i>TOTAL</i>	660,000	
Output 2: Management Plans	Very little active management of PSFs, leading to degradation of habitats and loss of globally significant biodiversity States 2,150,000 Federal 1,300,000  <i>TOTAL</i> 3,450,000	Improved management plans exist  States 2,150,000 Federal 1,400,000 DANCED 520,000  <i>TOTAL</i> 4,070,000	Effective management plans designed and implemented, with support of above enhanced information systems States 2,150,000 Federal 1,400,000 DANCED 520,000 GEF 635,000  <i>TOTAL</i> 4,705,000	DANCED Federal	520,000 100,000	GEF	635,000	
				<i>TOTAL</i>	620,000	<i>TOTAL</i>	635,000	
Output 3: Demonstration / Implementation	Current resource utilisation is unsustainable and biodiversity conservation efforts are minimal. Local communities pose a threat to PSF biodiversity through uncontrolled and potentially unsustainable encroachment  States 5,475,000 Federal 1,000,000  <i>TOTAL</i> 6,475,000	Effective methods for sustainable use of PSF biodiversity are demonstrated. Participatory systems reduce impacts of illegal encroachment and incorporate traditional knowledge into management and information systems. States 5,975,000 Federal 1,000,000 DANCED 775,000 Netherlands 830,000  <i>TOTAL</i> 8,580,000	Biodiversity conservation, is demonstrated at various project sites, providing examples for replication in Malaysia and elsewhere.  States 5,975,000 Federal 3,300,000 DANCED 775,000 Netherlands 830,000 GEF 1,225,000  <i>TOTAL</i> 12,105,000	States DANCED Netherlands	500,000 775,000 830,000	Federal GEF	2,300,000 1,225,000	
				<i>TOTAL</i>	2,105,000	<i>TOTAL</i>	3,525,000	

## ANNEX 5: PROJECT BRIEF INCREMENTAL COST ANALYSIS

7. Incremental Costs Summary Matrix								
	Baseline (B) (existing environmental management)	SD Baseline (SDB) (improved environmental management)	Alternative (A) (additional biodiversity conservation measures)	Increment 1 (SDB-B) (leveraged for sustainable development)		Increment 2 (A-SDB)		
Output 4: Inter-sectoral coordination	Weakly co-ordinated planning of development activities in and around PSF areas leads to hydrological impacts, fire, etc. States 825,000 Federal 500,000  <b>TOTAL</b> 1,325,000	Inter-sectoral approach to management reduces impacts of development on PSF areas States 825,000 Federal 500,000 DANCED 50,000  <b>TOTAL</b> 1,375,000	Inter-sectoral approach includes biodiversity as an element of decision-making States 825,000 Federal 500,000 DANCED 50,000 GEF 180,000 <b>TOTAL</b> 1,555,000	DANCED	50,000	GEF	180,000	
				<b>TOTAL</b>	50,000	<b>TOTAL</b>	180,000	
Output 5: Awareness	Low levels of awareness of PSF values lead to inadequate emphasis on conservation and sustainable use  States 375,000 Federal 500,000  <b>TOTAL</b> 875,000	Awareness is increased mainly in areas related to sustainable development, e.g., peatlands and drainage  States 375,000 Federal 500,000 DANCED 160,000  <b>TOTAL</b> 1,035,000	Increased levels of awareness lead to additional importance and value ascribed to Malaysia's PSF and wetland biodiversity and greater efforts to conserve these values States 375,000 Federal 500,000 DANCED 160,000 GEF 635,000 <b>TOTAL</b> 1,670,000	DANCED	160,000	GEF	635,000	
				<b>TOTAL</b>	160,000	<b>TOTAL</b>	635,000	
Output 6: Capacity building	Technical capacity to manage PSFs is weak  States 450,000 Federal 500,000  <b>TOTAL</b> 950,000	Technical capacities related to sustainable use improved  States 450,000 Federal 500,000 DANCED 150,000  <b>TOTAL</b> 1,100,000	Staff at all relevant levels possess improved technical capacities to understand and manage PSF and related wetland ecosystems States 450,000 Federal 500,000 DANCED 150,000 GEF 650,000 <b>TOTAL</b> 1,750,000	DANCED	150,000	GEF	650,000	
				<b>TOTAL</b>	150,000	<b>TOTAL</b>	650,000	
<b>TOTAL COSTS</b>	States 10,180,000 Federal 4,950,000  <b>15,130,000</b>	States 10,730,000 Federal 5,650,000 DANCED 2,285,000 Netherlands 830,000  <b>19,495,000</b>	States 10,730,000 Federal 7,950,000 DANCED 2,285,000 GEF 5,985,000* Netherlands 830,000  <b>27,780,000</b>	States 550,000 Federal 700,000 DANCED 2,285,000 Netherlands 830,000		Federal 2,300,000 GEF 5,985,000*		
					<b>4,365,000</b>		<b>8,285,000</b>	

\* Includes \$2,000,000 (PCU operations and agency overheads) not shown under individual outputs.



## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

### ANNEX 6: LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<p><b><u>DEVELOPMENT OBJECTIVE:</u></b></p> <p><i>To conserve and ensure the sustainable use of peat swamp forest biodiversity in Malaysia</i></p>			
<p><b><u>Project Purpose:</u></b></p> <p>To ensure the conservation and sustainable use of peat swamp forest biodiversity in three key sites while contributing to similar processes at national and regional levels</p>	<p>Populations of globally threatened species stabilized or increasing</p> <p>Managed peat swamp forest areas remain intact and physical functions are maintained</p> <p>Resource utilisation is made sustainable</p> <p>New management techniques widely demonstrated</p>		
<p><b><u>Outputs / Results</u></b></p> <p><i>Output 1:</i> Data collection and setting up of a monitoring programme and information management system to facilitate management &amp; decision-making</p>	<p>Ecological and hydrological evaluations and species-specific studies conducted (years 1-2, AL)</p> <p>Environmental monitoring system in place (end year 3, AL)</p> <p>Database systems are operational and on-line, levels of data exchange increasing steadily (end year 3, AL)</p>	<p>Project reports</p> <p>QPRs, SCC &amp; PSC minutes</p> <p>QPRs, SCC &amp; PSC minutes</p>	<p>Managers and decision-makers will make increasingly rational decisions in the context of improved data and information</p>

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
	<p>GIS biodiversity overlays are available (end year 3, SA)</p> <p>In-depth participatory appraisals are conducted (year 1, AL)</p>	QPRs, PSC minutes	
<i>Output 2:</i> Well-formulated site management plans, addressing issues such as biodiversity, physical functions & sustainable use	<p>Zonation of protected areas completed (years 1-2, AL)</p> <p>Thematic action plans prepared and adopted by relevant agencies (years 1-2, AL)</p> <p>Participation plans prepared (years 1-2, AL)</p> <p>Site management plans prepared and adopted (years 2-3, AL)</p>	Project reports, SCC & PSC minutes	Plans must be effectively implemented
<i>Output 3:</i> Implementation and demonstration of conservation and sustainable use of peat swamp forest ecosystem resources and functions	<p>Establishment of National Park infrastructure (years 1-2, LBNP)</p> <p>Creation of National Park interpretation (year 1, LBNP)</p> <p>Implementation of action and management plans (years 3-5, AL)</p> <p>Reduced impacts on protected area hydrology and ecology (years 1-5, AL)</p> <p>Participatory activities are implemented (years 2-5, AL)</p>	<p>QPRs</p> <p>Ecological monitoring reports</p> <p>Timetables included in management and action plans</p>	<p>Target groups apply knowledge and awareness gained through demonstration activities to long-term practices</p> <p>Communities remain interested in protecting conservation values, e.g., for future generations</p> <p>Women can be effectively targetted by the activities</p>

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<i>Output 4:</i> Inter-agency networks at State level to integrate biodiversity overlays into development planning on peatlands.	Meetings held which are successful in reconciling potential conflicts between agency plans and activities (AL)	SCC minutes	Networks have sufficiently high-level representation and authority to ensure that their decisions are respected by line agencies
<i>Output 5:</i> Decision-makers, communities and other stakeholders better aware of the importance of conserving peat swamp forests and associated wetland ecosystems	<p>70% of populations of target local communities made aware of project goals and philosophy (AL)</p> <p>Well-designed awareness materials widely distributed to relevant agencies, organisations, local communities and general public (AL)</p> <p>Significant numbers of visitors to LBNP and Klias protected areas are exposed to awareness materials concerning PSF and associated wetland ecosystems in Malaysia (SW, SA)</p>	<p>Field reports / surveys</p> <p>QPRs</p> <p>Entry figures to LBNP, Klias PAs</p>	<p>Increased awareness will lead to changes in attitudes and practices</p> <p>Political and development decisions will be sufficiently affected by increased awareness and popular support for wetland values</p>
<i>Output 6:</i> Strengthened institutional & human capacities to conserve & sustainably manage biological diversity in peat swamp forests & associated wetland ecosystems	<p>Peat swamp forest training materials are developed (year 1) and modified regularly to incorporate lessons learned at sites (NAT)</p> <p>Relevant training programmes designed and implemented (AL)</p>	<p>Training materials</p> <p>Report of training needs assessment and QPR reporting on workshops, seminars, etc.</p>	Trained staff are not transferred prior to being able to apply their new knowledge

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<p>Activities</p> <p><b>Output 1: Data collection and setting up of a monitoring programme and information management system to facilitate management and decision-making</b></p> <p><i>LBNP</i></p> <p>1.1.1 Conduct detailed ecological assessment (identify habitat, species distribution and specific threats).</p> <p>1.1.2 Assess hydrological regime of floodplain system.</p> <p>1.1.3 Design and implement an ecological monitoring programme.</p> <p>Conduct additional participatory appraisals with local communities.</p> <p>Development and implementation of project monitoring and evaluation indicators</p> <p><i>Klias</i></p> <p>1.2.1 Conduct detailed ecological assessment of protected areas.</p> <p>1.2.2 Design and implement ecological monitoring programme for the reserves.</p> <p>1.2.3 Conduct detailed hydrological assessment of the peninsula.</p> <p>1.2.4 Collate information on current and planned land uses.</p> <p>Collect demographic and socio-economic data on the peninsula to integrate into the planning process.</p> <p>Development and implementation of project monitoring and evaluation indicators</p> <p><i>Pahang</i></p> <p>1.3.1 Conduct detailed ecological assessment of reserves, including flora and fauna assessments to determine distribution and habitat requirements.</p> <p>1.3.2 Design and implementation of ecological monitoring programme.</p> <p>1.3.3 Conduct detailed hydrological assessment, including (i) survey of current/projected water needs, (ii) assessment of threats to PSF (e.g. fire) from water use by oil palm and aquacultural development in surrounding areas.</p> <p>Conduct timber resource assessment.</p> <p>Conduct participatory rural appraisals with local communities.</p> <p>Development and implementation of project monitoring and evaluation indicators</p>			

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<p><b>Output 2: Well-formulated site management plans, addressing issues such as biodiversity, physical functions and sustainable use</b></p> <p><i>LBNP</i></p> <p>2.1.1 Determine zonation for LBNP, including buffer zones, activity zones, core protection zone and multiple-use zones.</p> <p>2.1.2 Develop a series of action plans covering species, habitats, hunting, hydrology, fisheries, ecotourism, etc.</p> <p>2.1.3 Develop a detailed participation plan for community involvement in park management.</p> <p>2.1.4 Develop alternative livelihood options for local communities, incorporating sustainable resource use and self-regulatory mechanisms.</p> <p>2.1.5 Integrate the above action plans into a comprehensive management plan.</p> <p><i>Klias</i></p> <p>2.2.1 Formulate specific strategies / action plans to ensure effective conservation of globally significant species and habitats.</p> <p>2.2.2 Prepare integrated management plan (including zonation) for Protected Areas.</p> <p>2.2.3 Create biodiversity overlays using information from 1.2.1 – 1.2.5.</p> <p>2.2.4 Formulate strategies for water management for Protected Areas and other peatland areas.</p> <p>2.2.5 Implement a public participation and feedback structure to integrate local community perceptions and priorities into the planning process.</p> <p><i>Pahang</i></p> <p>Determine zonation for PFE Reserves, including core protection areas to be excluded from timber extraction, habitat corridors, riparian protection zones and buffer zones.</p> <p>Prepare biodiversity overlays</p> <p>2.3.2 Formulate specific strategies to ensure effective conservation of globally significant biodiversity (e.g., hairy-nosed otter, tiger, durian).</p> <p>2.3.3 Formulate detailed forestry action plan, including strategy for logging operations which have minimum impact on core protection areas and are adaptable to different PSF habitats, as well as silvicultural and rehabilitation plans.</p> <p>2.3.4 Prepare integrated management plan for PFE Reserves, incorporating local community resource (e.g. water) use requirements and strategies to mitigate threats from surrounding land use practices.</p>			

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<p><b>Output 3: Conservation and sustainable use of peat swamp forest ecosystem resources and functions demonstrated</b></p> <p><i>LBNP</i></p> <p>3.1.1 Establish management presence at LBNP, including development of key infrastructure.</p> <p>3.1.2 Implementation of specific action plans and other elements of management plan, including management of river boundaries, riparian wildlife corridors, relocation of longhouses and patrolling of National Park boundary.</p> <p>3.1.3 Development of ecotourism infrastructure e.g. visitors' centre, boardwalks, etc.</p> <p>3.1.4 Development of park interpretation, e.g. trails, signs, brochures, etc.</p> <p>3.1.5 Implement community participation plan, alternative livelihoods and sustainable resource use strategies.</p> <p><i>Klias</i></p> <p>Implement species/ ecosystem management and protection plans, including support for activities in forest rehabilitation and enrichment planting</p> <p>3.2.2 Integrate results of conservation (2.2.1-2.2.3) and development (2.2.4, 2.2.5 and baseline planning activities) planning processes into a biodiversity conservation master plan for Klias Peninsula.</p> <p>3.2.3 Support pilot activities in forest rehabilitation and enrichment planting in degraded peat areas.</p> <p>Implement small-scale hydrological solutions (e.g. closing drains, inexpensive wooden weirs) in critical locations neighboring Klias FR</p> <p>Implement strategy for alternative livelihoods</p> <p><i>Pahang</i></p> <p>3.3.1 Carry out a simulation model for optimum harvesting in PSF.</p> <p>3.3.2 Implement species / ecosystem management and protection plans within core protection areas.</p>			

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<p>3.3.3 Conduct forest rehabilitation activities within degraded areas as well as enrichment planting of commercial and other important food trees.</p> <p>3.3.4 Implement small-scale hydrological solutions (e.g. closing drains, inexpensive wooden weirs) in locations where current water use/ drainage practices are threatening forest reserves.</p> <p><b>Output 4: Inter-agency networks at State level to integrate biodiversity overlays into development planning on peatlands</b></p> <p><i>LBNP</i></p> <p>4.1.1 Co-ordinate with NREB on enforcement of prescribed activities under EIA.</p> <p>4.1.2 Co-ordinate with State development agencies (e.g. LCDA) &amp; NGOs in development of alternative livelihood options for local communities.</p> <p>4.1.3 Mitigate potential impacts of development on LBNP through active coordination using existing mechanisms, for example Forest Department inputs into land use planning and EIA review mechanisms.</p> <p><i>Klias</i></p> <p>4.2.1 Establish and support operations of a Wetlands Management/ Project Steering Committee (PSC).</p> <p>4.2.2 Ensure appropriate institutional linkages to allow effective liaison with existing planning processes, e.g. local planning, EIAs and planning approvals.</p> <p><i>Pahang</i></p> <p>4.3.1 Establish and support operations of a Wetlands Management / Project Steering Committee, chaired by State Secretary and with appropriate inter-agency representation, to ensure biodiversity conservation and to minimise impacts on Forest Reserves of activities on surrounding peatlands.</p>			

## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<b>Output 5: Decision-makers, communities and other stakeholders better aware of the importance of conserving peat swamp forests and associated wetland ecosystems</b>			
<i>LBNP</i> 5.1.1 Design and implement campaign to raise awareness among local target populations re: significance and benefits of National Park 5.1.2 Seminars to raise awareness among high-level decision-makers re: conservation and sustainable use of PSF areas.			
<i>Klias</i> 5.2.1 Design and implement awareness campaign aimed at local communities, decision-makers and planners; including public review and comments on the integrated management plan for Reserves and the biodiversity conservation master plan.			
<i>Pahang</i> 5.3.1 Design and implement awareness campaign aimed at local communities, decision-makers and planners. Local communities include native populations, surrounding commercial enterprises, etc. 5.3.2 Conduct seminars and field visits to educate potential logging contractors on sustainable forestry practices and environmental significance of PSFs.			
<i>National</i> 5.4.1 Awareness raising activities aimed at disseminating experiences and lessons of site components			



## ANNEX 6: PROJECT BRIEF LOGICAL FRAMEWORK MATRIX

Intervention Logic	Indicators of Performance	Sources of Verification	Risks and Assumptions
<b>Output 6: Strengthened institutional and human capacities to conserve and sustainably manage biological diversity in peat swamp forests and associated wetland ecosystems</b>			
<i>LBNP</i> 6.1.1 Conduct training needs analysis. 6.1.2 Design and implement workshops and training programmes for all levels of Government participants, from decision-makers to forest rangers and front-liners.			
<i>Klias</i> 6.2.1 Conduct training needs analysis, to benchmark current planning skills and technical capacity. 6.2.2 Design and implement workshops and training courses, e.g. in the preparation and use of biodiversity overlays and community involvement techniques in local planning.			
<i>Pahang</i> 6.3.1 Conduct training needs analysis. 6.3.2 Design and implement workshops and training courses for all levels from decision-makers to forest rangers and front-liners from relevant agencies and local institutions. 6.3.3 Provide training for timber industry personnel in implementing RIL guidelines and techniques.			
<i>National</i> 6.4.1 Design training manuals and modules for PSF management.			

## RESPONSE TO COMMENTS FROM COUNCIL MEMBERS

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### 1. Comments from France:

*1.1 Comment: The project is technically sound and is site level-related. As above, the proposal combines the necessary protection of the threatened ecosystem and ecological processes. However, in that project, conservation approach is not really innovative, especially regarding the national component.*

**Response:**

The innovativeness of this project lies in its focus rather than in its methodologies. The application of conservation approaches such as sustainable resource management, community wildlife management and integrated development planning **to tropical PSF areas**, where such approaches had not generally been attempted before, is innovative. Furthermore the application of three distinctly different conservation approaches to tropical PSF at three separate sites, as a means of demonstrating **the range of conservation approaches** which might be applied, is also notable. By demonstrating a range of conservation methodologies which might be applied to tropical PSF areas, it is hoped to reinforce the idea that conservation, as a goal, can be achieved through a variety of approaches depending upon prevailing economic, social, legal and institutional circumstances.

The project intends to undertake separate but related activities at three different PSF sites, each located within the jurisdiction of a different State government. The **national component** is intended to ensure that activities and objectives at the three separate sites are coordinated and mutually-reinforcing. The national component will also be the vehicle through which most training and awareness activities are undertaken. Thus the national component will serve to link activities at the three sites, to promote the exchange of information and the sharing of experiences, and to draw out the common underlying challenges, solutions and lessons to be learnt for the conservation of tropical PSFs.

*1.2 Comment: Missing is a description of a strategy to increase economic viability of each site. In addition, explanation about why and how sites have been selected is still unclear.*

**Response:**

**Economic viability:** Detailed socio-economic analyses of each of the three project sites, which elaborates upon the economic base of each site area, is provided in the Stakeholder Consultation Annex (Annex 4). The impact of the project's activities on the economic viability of each area is as follows:

1. **South-East Pahang Peat Swamp Forest, Pahang:** The site is gazetted as a production forest area, and therefore the primary economic activity in the area will be sustainable utilization of resources such as timber and various non-timber forest products. The project will prepare management plans to ensure that conservation of PSF biodiversity in the area is guaranteed through sustainable resource management techniques, while at the same time providing for the economic, cultural and social needs of the surrounding communities and other stakeholders. The management plans and conservation approaches to be developed by the Project will be implemented and sustained by the State Government through the Forestry Department, which has and will continue to have jurisdictional authority over the entire forest area.
2. **Loagan Bunut National Park, Sarawak:** LBNP has been a National Park for almost ten years, and during this time economic utilization of the Park area has been minimal, consisting entirely of fishing in the lake and small-scale padi cultivation by Native Customary Rights holders from a nearby longhouse (Rumah Kagan Sigeh). The project will help improve the economic viability of the Park by promoting sustainable and ecologically-sound eco-tourism activities. These activities will assist in improving the standards of living of surrounding communities, whilst ensuring that these local stakeholders develop a strong and continuing stake in the conservation and sustainable management of the Park.
3. **Klias Peninsula, Sabah:** The Klias site consists of a patchwork of Forest Reserves, surrounded by numerous villages and agricultural developments. These surrounding communities are relatively poor, and depend primarily upon agriculture (oil palm, rubber and fruits) and fishing for sustenance. The focus of the Project at this site is to conserve the remaining forest areas (within these Forest Reserves) by devising economic development and land-use planning approaches which integrate conservation priorities and economic development needs. The economic viability of the area will be enhanced by introducing developmental and planning strategies which move away from the expansion of agricultural areas as a means of raising incomes, since such expansion is economically unviable in the longer-term. Instead economic and land use planning approaches will be introduced which focus upon economic development which is not land-intensive and which does not jeopardize the ecological integrity of the Forest Reserves.

**Site Selection:** The process of site selection, which was built upon consultative, stakeholder-driven planning, is described in Section A1 (Environmental Context), pp.1-2 of the Project Document.

## **2. Comments from Germany:**

**2.1 Comment:** *Level of funding. Other than the usual, the project proposal gives an estimate of the costs of the operations of the Project Coordination Unit (PCU). As these costs cannot be attributed to certain results/outputs, nor can they directly be derived as incremental costs, a short description of the costs comprised under this item would be needed.*

### **Response:**

The organisational structure of the Project places all staff employed, including State Experts responsible for individual State components, under the Project Support Unit (formerly called PCU). As a consequence all staff costs (salaries, mission costs, etc.) are included in the PSU budget, and these costs form the bulk of the approximately USD1.5 million allocated for PSU operations. Although these costs cannot be attributed directly to individual components or derived as incremental costs, they are obviously an integral component of overall project expenditure and essential to the project's success. Actual operational costs for the PSU itself total approximately USD100,000 for the five-year period. Full details of costs and budget allocations for the PSU are provided in the budget, Appendix 1.

**2.2 Comment:** *Project Activities: The proposed implementation measures for the Klias Peninsula include the preparation of a biodiversity conservation master plan-, which is clearly a planning measure and not an implementation measure. Emphasis should indeed focus on implementation.*

### **Response:**

The Klias component is based upon the use of **planning measures as a means of conserving biodiversity**. Therefore implementation of this component involves the development of planning measures such as the biodiversity conservation master plan. Thus the biodiversity conservation master plan here should not be seen as a planning measure per se, but as **a core component of the conservation strategy** being implemented at this site.

**2.3 Comment:** *The project foresees “enrichment planting for biodiversity enhancement”. It is actually not understood what is meant by this. Is it planned to introduce alien species for increasing species diversity?*

### **Response:**

Some parts of the buffer zones at the SEPPSF and Klias sites were degraded by forest fires in 1997/98. Regrowth in such areas is generally limited to fast-colonizing shrubs and heath with limited biodiversity. If left alone, such areas would take a long time to re-develop significant biodiversity. One of the ancillary aims of the project is to study

methods by which carefully-planned enrichment planting, **using species native to the area**, can hasten the regeneration of such burnt-out areas. **There is no intention whatsoever to introduce any alien species into these areas**, as all planting will only utilise species already present in the relevant PSF area.

### **3. Comments from Switzerland:**

**3.1 Comment:** *The project is consistent with GEF criteria and very relevant regarding the objectives pursued. The importance of peat swamp forests is very high; as these are everywhere very degraded and very threatened ecosystems. We agree with the remarks made by the STAP reviewer and appreciate the process of early review adopted by the project planners. This provides us with a project brief that has already benefited from expert comments and has been adjusted accordingly.*

*Sustainability: We would like to express our concern about the project's prospects for sustainability, both in terms of financial and institutional aspects. It is frequently repeated in the brief that the issue of financial sustainability is less of a problem in this project, as compared to others, since the main focus is on policy reform which results in few recurrent costs. It appears, however, that there are several instances where long-term financing will be indispensable, e.g. eco-tourism infrastructure (activity 3.1.3) or pilot activities in forest rehabilitation (3.1.3).*

#### **Response:**

**Eco-tourism infrastructure** is being developed (and will be maintained) by the Sarawak Forest Department, partly through grants from the Federal Ministry of Culture, Arts and Tourism. This infrastructure is **not** being supported by GEF funds. This eco-tourism infrastructure was not just developed to support this GEF project, but is part of the broader eco-tourism development strategy being pursued by MOCAT. Thus the financial and institutional sustainability of this eco-tourism project is the responsibility of the Government, which has and will continue to provide the required resources for it through the operational budget of the National Parks and Wildlife Office (NPWO) in Sarawak.

**Pilot activities in forest rehabilitation** will be also be funded largely by the Government via the Forestry Department (FD), as part of existing forest rehabilitation programmes (which form an integral part of the Forestry Department's mandate). Any rehabilitation activities developed under this Project will be undertaken in conjunction with the Forestry Department, and all such activities will be sustained by FD after the lifespan of the Project.

No other GEF-funded activities of the Project are anticipated to require long-term financing. Any activities which are intended to continue after the life-span of the Project will be funded by Government or bilateral donor funding, and responsibility for the future sustainability of such activities will be borne entirely by the Government.

**3.2 Comment:** *Unfortunately, the brief also presents no strategy to promote the economic viability of each site and to provide alternative livelihood options to local stakeholders.*

**Response:**

The issue of the economic viability of each site has been addressed in response to comment 1.2 by France above. **Alternative livelihood options** will be an integral part of the Project, wherever required to address any threats arising from unsustainable livelihood practices by local stakeholders. However no major threats are expected, as the peat swamp forests that are the focus of the Project do not form significant resource bases for any of the local communities in the vicinity. PSF areas are generally inaccessible, and thus local communities do not interact with these forests to a great degree.

Nevertheless the Project has programmed extensive socio-economic and participatory appraisals at each of the three sites, totaling eighteen months' input by national experts. Integral to the terms of reference for these appraisals (**see annex 2**) is estimation of any threats arising from local stakeholder activities and the development of alternative livelihood strategies to ameliorate any such impacts. Such programmes will focus on eco-tourism and related activities at Loagan Bunut, non-timber forest resource utilization at SEPPSF and non-land intensive income generation activities at Klias. The Government has an existing network of economic development agencies, agricultural development programmes, local community empowerment schemes, Orang Asli Affairs programmes, etc. which will provide the required resources to implement such programmes under the 8<sup>th</sup> and 9<sup>th</sup> Malaysia Plans.

**3.3 Comment:** *Regarding the issue raised by the reviewer about adequate planning for the continuation of project activities after project completion: the answer provided is that “change (in existing policies and structures to ensure effective biodiversity conservation and sustainable management) in itself, successful, will ensure continuation”. However there is no mentioning of specific measures aimed at enhancing the likelihood for success.*

**Response:**

The thrust of the project is to **demonstrate** three different conservation approaches at three tropical PSF sites in Malaysia. Success, in this context, is largely dependent upon the **continuation and replication of the approaches developed** in other tropical PSF areas, both within Malaysia and in the broader region.

The approach being used in **Pahang** is based on the development of sustainable resource management plans for PSF areas which are earmarked for productive use. These plans will be developed in close cooperation with the Forestry Department, which is also responsible for a number of other tropical PSF areas designated for production. The Forestry Department is extremely keen to develop management plans which are

sustainable, economically-viable and ecologically-sensitive, not least due to the growing international demand for forest products (e.g. timber) which are harvested in sustainable ways. Thus, provided the plans developed are effective and workable, the incentive to replicate these approaches at other areas, and to continue to utilize this approach at SEPPSF, will be very strong.

In **Loagan Bunut, Sarawak**, the approach being developed is the promotion of community wildlife management through activities such as eco-tourism. Tourism is one of the primary sources of foreign revenue in Malaysia, and eco-tourism has been identified as a priority growth strategy to capitalize upon Malaysia's abundant natural wealth. This is the basis upon which the Ministry of Culture, Arts and Tourism has provided a substantial (USD 3.16 million) grant for the development of eco-tourism infrastructure at Loagan Bunut. An effective, community-based and community-focused eco-tourism development framework will therefore have widespread application throughout Malaysia and the region, including at existing protected forest areas such as Taman Negara and the Endau-Rompin region in Peninsular Malaysia as well as the numerous Parks and Reserves in Sarawak and Sabah. Yet again the incentive to continue and replicate such an approach would be very strong.

The integrated land-use planning approach being developed at **Klias, Sabah** addresses an urgent and widely-recognised need in Malaysia. Due to the country's rapid economic development and the opening-up of many new agricultural areas and population centres, the existence of sensitive ecological sites subject to developmental pressure is an increasingly common problem, as it is in many other parts of tropical Asia. Numerous wetland areas, in particular, have come under threat from uncoordinated development. Whilst this problem is recognized, comprehensive and integrated planning approaches to incorporate ecological conservation into local planning processes is lacking, and the Project's ability to address this need will be the primary determinant of its replicability. If the Klias component is successful in reducing developmental pressure on the Klias forest reserves while promoting integrated and effective local planning, the prospects for replication of these advances in other areas (as well as sustaining this approach at Klias) will be very positive.

Success in this project will be dependent upon changes in policy, and it is difficult to map out a definitive path via which policy changes can be achieved. However a number of **specific measures** have also been included in the Project to encourage such policy changes. These include:

- The establishment of state-level Wetlands Management Committees which will continue to function after the end of the Project. [*Activities 4.2.1 and 4.3.1*]
- Enhancing inter-sectoral linkages to incorporate conservation priorities into development planning processes. [*Activities 4.1.3 and 4.2.2*]
- Awareness programmes targeted at senior decision-makers. [*Activities 5.1.2, 5.2.1, 5.3.1 and 5.4.1*]
- Extensive training programmes for senior decision-makers as well as staff of the Forestry Department and other line agencies. [*Activities 6.1.2, 6.2.2, 6.3.2*]

- National-level training programmes in sustainable management of peat swamp forests. [Activity 6.4.1]

Successful achievement of the Project's objectives, enhanced by the institutional processes and training and awareness activities described above, should ensure that the policy changes developed by the Project would be sustained and widely replicated.

**3.4 Comment:** *While Annex C1 establishes “a commitment to apply guidelines for forest management established through the project”, the text of the brief fails to elaborate on how such a commitment could be put into practice. It seems insufficient to address this issue by simply listing this important commitment under ‘critical assumptions’ in the logical framework matrix (Annex B).*

**Response:**

The issue of this commitment has been discussed with the Pahang State Government, and the Government has indicated that the State Executive Council (the highest executive decision-making body in the State) has already accepted the goals and objectives of the Project in principle, during a meeting in June 1998. The guidelines, once established, will be presented to the State Executive Council for approval and adoption, at which time they will become an integral part of State Government policy.

**3.5 Comment: Resettlement:** *As indicated in the project summary, another major source of concern is the resettlement of indigenous human groups. The project brief is rather elusive on this point, giving the impression that the authors feel uncomfortable with this issue. So do we. Two of the three project sites are concerned; Orang Asli living in S.E. Pahang (component 3) are “progressively being relocated to villages outside the area”, while there are “pre-existing government proposals to negotiate agreements resulting in relocation (of Iban settlers)” in LBNP, Sarawak (component 1). It is claimed that such arrangements constitute independent government initiatives, and that any future resettlement would occur independently of the project. On closer examination however, we find that “relocation of longhouses” is included in activity 3.1.2 (Annex B). No major concerns are expressed and there is no commitment to abandon such policies. Instead, it is simply stated that the project is “not affected by this issue”.*

**Response:**

The issue of resettlement was the topic of extensive discussions with the State Governments of Pahang and Sarawak during missions undertaken by UNDP in September and October 1999. The clarifications provided and assurances given have been detailed in **Section A2 (Socio-Economic Context), pp 4-5** of the Project Document. Attention is drawn in particular to the clarifications and Government commitments detailed in **footnotes 4 and 5**. In **Sarawak**, the State Government has provided an explicit assurance that the project will not be used as justification for the



resettlement of any of the Iban settlers, nor is any such resettlement being envisaged outside the context of this project.

The socioeconomic development strategy for Orang Asli communities in Peninsular Malaysia (including **Pahang**) includes a voluntary resettlement programme which is intended to facilitate the provision of infrastructure and services such as roads, schooling, healthcare and utilities by clustering families from isolated settlements in larger villages. In addition relocation to larger, more accessible communities provides greater employment opportunities and thus assists to improve the standards of living of these Orang Asli communities. This resettlement programme is entirely voluntary, a fact which was reaffirmed during local stakeholder consultations in the area.

**3.6 Comment:** *Unfortunately we have not been provided with Annex VII, which supposedly provides details on the consultations with local stakeholders and the subsequent integration of their concerns and their input into the design of proposed activities. Considering the central importance of this issue we find this regrettable and we are concerned that stakeholder consultation and participation issues may not have been addressed with sufficient thoroughness.*

**Response:**

Stakeholder consultation and participation activities have been detailed once again, in **Annex 4** attached herewith. Annex VII was not circulated to Council members by the GEFSEC in line with the GEFSEC's policy on circulation of briefs

**3.7 Comment:** *Further comments: The general approach of the project is to demonstrate the management of three diverse peat swamp forests for conservation and sustainable use. Although it may constitute a sound way to address the problems identified, the project does not go into much detail on the methods (e.g. management methods, forest restoration or enrichment) to be used for that demonstration. The activities detailed in Annex B (B-4-7) remain also very vague (e.g.: support pilot activities in forest rehabilitation {3.2.3}, conduct forest rehabilitation activities {3.3.3}...)*

**Response:**

The specific activities referred to in the comment (3.2.3 and 3.3.3) are not being funded by GEF. These activities are being funded via international co-financing through parallel bilateral projects. For additional clarity all such co-financed activities have been italicised and their funding source identified in Section D of the Project Document.

Funding for these activities has been committed, and the objectives to be achieved have been agreed. However the specific details of the activities (i.e. the exact wording used to describe them) are being finalised, and thus they have been described here in somewhat general terms. These activities have been reflected in this Project Document in order to provide a complete picture of the activities to be undertaken at the project sites, and to

show the logical flow of the various activities (including those not undertaken by the Project) that will culminate in achievement of the desired objectives.

Certain other (GEF-funded) activities at the implementation stage of the project have also been described in general terms. This is because the specific approach to be taken is often determined based on the results of earlier activities. For instance the specific hydrological rehabilitation measures to be implemented under activities 3.2.4 and 3.3.4 depend upon the results of the hydrological analyses undertaken in activities 1.2.3 and 1.3.3. It is not certain at this stage what types of hydrological rehabilitation methods will be recommended. Thus the activities are described in general terms (e.g. “Implement small-scale hydrological solutions”) rather than specifying which particular methods will be used.

In the course of the project annual Workplans will be produced which are progressively more specific on the activities to be undertaken, as baseline data and preliminary results being obtained will allow more specific methods and approaches to be defined. At every stage the most practical and effective approaches will be used to achieve the outputs and objectives that have been defined in the Project Document.

**3.8 Comment:** *This underlies the necessity for further research, as repeatedly pointed out by the reviewer. The commitment of FRIM for establishing methods for the sustainable use of peat swamp forests (PSF) has been improved but remains probably insufficient. In any case, no detail, of purpose, organization and expected results are provided in the brief. These ecosystems are poorly understood, but tend to be considered forests that are difficult to regenerate after logging.*

**Response:**

In the course of discussions with the Government of Malaysia over the past year, additional funds for research into sustainable use of PSF have been obtained. In addition to the FRIM project mentioned above, two other projects have been proposed (and approved in principle) for programming under the forthcoming 8<sup>th</sup> Malaysia Plan. These are:

1. **Development of rehabilitation and silviculture techniques for Peat Swamp Forests** (Forestry Department/ Regional Centre for Forest Management/ FRIM joint project) for USD 480,000.
2. **The impact of logging, forest fires and other forest activities on carbon sequestration in Peat Swamp Forests** (Forestry Department/ Regional Centre for Forest Management joint project) for USD 200,000.

Full details of these projects (organisation, activities, expected results, etc.) will be provided upon finalisation and approval by the Government.

**3.9 Comment:** *The key concern about compatibility between logging and conserving biodiversity has not been addressed; and the proposal of a plan for silvicultural experiment and monitoring not fully taken into account.*

**Response:** The fundamental underlying objective of the SEPPSF component in Pahang is to address the compatibility between logging and conserving biodiversity. It is widely appreciated that uncontrolled or poorly-managed logging activities seriously degrade PSF areas, and indeed that logging activities of any kind will degrade PSF forests to some degree or other. Nevertheless many ecologically-significant tropical PSF areas are being and will continue to be earmarked for harvesting. The objective of the SEPPSF component is to investigate how such resource extraction activities can be undertaken while still preserving the core biodiversity values of such areas. Ideally all ecologically-significant tropical PSF areas should be totally protected, however it is inevitable that many such areas will be harvested. It is the objective of this component to devise and demonstrate methods by which such resource exploitation can be undertaken while minimising its detrimental impact on the biological diversity of these ecologically and economically valuable forest areas.

**Silvicultural experiment and monitoring plans** have been programmed under the 8<sup>th</sup> Malaysia plan as was described in response 3.8. These programmes will build upon existing DANCED-funded work being undertaken by the Forestry Department in a small Virgin Jungle Reserve at SEPPSF, as was described in paragraph 34 of the Project Brief.

**3.10 Comment:** *The idea of considering the importance of PSF as potential carbon sink has not really been developed in what we consider a missed opportunity to place this project in the context of GEF's new operational program on carbon sequestration. In the brief carbon sequestration is listed as a global benefit in the incremental cost matrix, but no methodological work has been undertaken to try and quantify or estimate carbon sequestration effects.*

**Response:** At the time of preparation of the brief, the GEF did not have an Operational Programme on Carbon-sequestration. Rather than trying to fit the project to expectations of what might constitute a future Carbon sequestration Operational Programme, it was decided that a lower-risk option was to focus the project on biodiversity conservation. This decision appears to have been vindicated by the fact that subsequent changes to the new Operational Programme have resulted in it's focus changing from Carbon sequestration to 'Integrated Ecosystem and Resource Management'. We absolutely agree with the STAP reviewer that conservation of peat swamp forests carry a very significant global benefit in terms of Carbon sequestration. Given its approval under the Biodiversity focal area, quantification of Carbon sequestration benefits as a project activity would not be appropriate, but the project sites could well prove to be a valuable asset for any targeted research project on the global benefits of peat swamp forest conservation from the perspective of Carbon sequestration.