PROJECT DEVELOPMENT FACILITY
REQUEST FOR CONCEPT NOTE FOR PIPELINE ENTRY

AGENCY'S PROJECT ID: TBD
GEFSEC PROJECT ID: 2751

COUNTRY: Multicountry: Indonesia, Malaysia, Thailand, Viet Nam, Singapore & Brunei Darussalam

PROJECT TITLE:
Rehabilitation and Sustainable Use of Peatlands in South East Asia

GEF AGENCY: IFAD
OTHER EXECUTING AGENCY(IES):
ASEAN Secretariat & Global Environment Centre

DURATION: 12 months

GEF FOCAL AREA: Land Degradation
GEF OPERATIONAL PROGRAM:
OP #15 Sustainable Land Management
GEF STRATEGIC PRIORITY:
SLM 1, SLM2 with linkages to BD 4

ESTIMATED STARTING DATE: May 2005
ESTIMATED WP ENTRY DATE: July 2006
PIPELINE ENTRY DATE: (IF APPLICABLE)

FINANCING PLAN (US$)	
GEF ALLOCATION	
Project *(estimated)*	4,660,000
Project Co-financing *(estimated)*	17,000,000
PDF A	-
PDF B	340,000
PDF C	-
SUB-TOTAL GEF PDF	
PROJECT CO-FINANCING	
GEF Agency (IFAD)	50,000
National Contribution (in kind)	75,000
Others	75,000
Sub Total PDF Co-Financing:	200,000
Total PDF Project Financing:	**540,000**

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENTS:

Indonesia	31 March 2005
Malaysia	30 March 2005
Thailand	
Viet Nam	8 April 2005
Support letter from non-eligible partner countries:	
Brunei Darussalam	12 April 2005
Singapore	28 April 2005

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for approval.

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LIST OF ACRONYMS

ASCC	ASEAN Socio-Cultural Community
AMCs	ASEAN Member Countries
AMMH	ASEAN Ministerial Meeting on Haze
APMI	ASEAN Peatland Management Initiative
APMS	ASEAN Peatland Management Strategy
ASEAN	Association of Southeast Asian Nations
ASOEN	ASEAN Senior Officials on the Environment
CBD	Convention on Biological Diversity
COSOP	Country Strategic Opportunities Paper
CPRGS	Comprehensive Poverty Reduction and Growth Strategy (Viet Nam)
EIA	Environmental Impact Assessment
GEC	Global Environment Centre
GEF	Global Environment Facility
GHG	Green House Gases
HTTF	Haze Technical Task Force
IFAD	International Fund for Agricultural Development
MoNRE	Ministry of Natural Resources and Environment (Malaysia)
NAP	National Action Programme
NGO	Non-governmental Organisation
OP	Operational Programme
PDFB	Project Development Funds- Block B
PSF	Peat Swamp Forests
SE Asia	South East Asia
SLM	Sustainable Land Management
SRFA	Sub-Regional fire-fighting Arrangements
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention for climate change
US $	US Dollar

PART I - PROJECT CONCEPT

A. SUMMARY

Project Title: Rehabilitation and Sustainable Use of Peatlands in South East Asia

A.1 Project Rationale

Status and Values of Peat Swamp Forests
One of the major land types in South East Asia is peatlands. In a natural state these occur as peat swamp forests. These wetland forests have developed primarily in the coastal lowland plains in-between major rivers. They cover approximately 35 million ha in the region with the majority in Indonesia, Malaysia, Brunei Darussalam, Thailand and Viet Nam and smaller areas in Myanmar, Lao PDR and the Philippines. In Indonesia, Malaysia and Brunei Darussalam they form more than 10% of the land area of the country. Peat swamp forests play a critical role in the economy and ecology of the region - providing timber and non-timber forest products, water supply, flood control and many other benefits. They also play a very significant role of global significance in storing an estimated 120 billion tonnes of carbon or approximately 5% of all global terrestrial carbon as well as being repositories for unique and important biodiversity.

Degradation of Peatlands
Over the past 30 years, peat swamp forests have been increasingly cleared, drained and degraded as a result of unsustainable forestry and agricultural practices. An estimated 13 million ha have been impacted and often degraded by legal and illegal logging activity which often involves drainage of the peat during the extraction process or over exploitation of forest resources. Although most peatland soil (especially those deeper than 2 m) is marginal to poor for agriculture, 5-7 million ha have been cleared and drained in the region for agriculture and plantation projects - mainly oil palm, pulpwood, rice and various small-scale crops. Many of these agricultural programmes in peat have ended in failure with the most notable example being the so-called Mega-Rice Project in Kalimantan, Indonesia where 1 million ha was cleared and drained for rice cultivation although less than 5% was suitable for this purpose. This scheme and many others were abandoned before they were complete.

Peatland Fires and Transboundary Smoke Haze
Peat swamp forests (PSF) under natural conditions are very resistant to fire due to naturally high water tables. They are only vulnerable to above and below ground fires when water levels fall due to drainage or during severe droughts. Once the peat soil has been drained it is very vulnerable to fire. In the past 10 years approximately 2.5 million ha of peatland in the region has burnt in major fires, releasing an estimated 2-3 billion tonnes of stored carbon to the atmosphere and blanketing the SE Asia region in dense clouds of smoke. The smoke resulting from the fires stretched over one million square kilometres for up to six months, adversely affecting the health of up to 70 million people (Moore, 2002). In terms of losses to production (reduction in crop yields, fishing efforts, and industrial and commercial activities), tourism, airline and airport and averting expenditures for haze control, it was estimated that the haze between August and October 1997 caused by forest fires in Indonesia resulted in a loss of US$300 million to Malaysia (Mohd Shahwahid & Jamal, 1999) and up to US$9 billion in the SE Asia region for the whole 1997-98 fire season.

Since 1997-98 there have been regular peat fires in the region whenever there is a dry period of more than 2-3 weeks. These fires have been extensive in the El Niño year of 2002 and indications are that 2005 (an El Niño year) will also have severe fires with extensive peatland fires in Malaysia, Indonesia and Brunei in January and February 2005.

Degradation Due to Drainage and Subsidence
Even without fire, the peatlands of the region degrade rapidly once they are drained with land subsidence of up to 3m as recorded in some parts of the region following unregulated drainage. Subsidence in deep peat leads to flooding, destruction of infrastructure and other impacts. Shallow peatlands are frequently underlain by potential acid-sulphate soil, hence drainage and loss of the peat layer often leads to further acidification of soil and groundwater making agriculture and settlements impossible.

Environmental and Socio-Economic Impacts
All of these various problems have combined to make the degradation of the peat swamp forests of South East Asia into one of the most extensive and important land degradation problems in the world. Unless urgent action is taken to address this problem, it will have major global environmental and social implications. If the stored carbon within the peatlands in the region is released, it will have a significant impact on global climate as it is equivalent to 20 years of current global fossil fuel emissions. The loss of biodiversity will also be significant at the global level. Peatlands are the last refuge of such flagship species as the orang utan as well as being repositories of over 2500 plant species (including over 500 medicinal plants) and over 300 fish species - many of which are restricted to this habitat.

Loss of peatlands will also have a significant social, health and economic impact for the people in the region. Fires in less than 6% of the region's peatlands have caused US$9 billion worth of damage in one year and led to over 500,000 people seeking medical treatment for respiratory ailments. The key functions that peatlands play in water storage and supply as well as flood control and the prevention of saline intrusion will also be compromised by further degradation of the system.

Responses to the Problems
With increasing recognition of the significance of peatland degradation in the ASEAN region, there has been a growing level of activities at national and regional level. At national level there have been a range of actions initiated including the establishment of national mechanisms for monitoring and controlling peat fires. There have also been some measures to promote the sustainable use of peatlands in some sites, but these have not been scaled up to national or regional level. The focus to date has been primarily focused on addressing the symptoms of the problem – such as controlling peatland fires, addressing land subsidence and flood control following peatland degradation.

At the regional level, the ASEAN countries have started to establish a number of mechanisms to address forest and peatland fires and associated transboundary smoke haze. These include the ASEAN Regional Haze Action Plan and the ASEAN Agreement on Transboundary Haze Pollution (see Annex 1). The focus on the specific problems related to peatland has led to the adoption in February 2003 of the ASEAN Peatland Management Initiative (see Annex 2) and the initial development of the associated ASEAN Peatland Management Strategy for wise use and sustainable management of peatlands. Addressing environmental degradation especially transboundary haze pollution has been highlighted in ASEAN Vision 2020 as well as being as a key element in the proposed ASEAN Socio-Cultural Community (see Annex 3).

Over the past 10 years the international donor community has started to provide some support to address the problem of forest and peatland fires in the region. Support has come from a range of sources including the ADB, European Union, JICA, GTZ, CIDA, Netherlands Government and GEF. Support has primarily focused on fire control, monitoring and early warning. Relatively few projects have focused on longer term fire prevention through sustainable peatland and forest management. In the past five years some projects have started to look at the issue of peatland management in relation to sustainable use. The largest of these has been the Climate Change Forest and Peatland in Indonesia project (CCFPI) supported by CIDA and implemented by Wetlands International Indonesia, Wildlife Habitat Canada and Global Environment Centre in conjunction with a range of national and local agencies and community groups. This project has developed a number of modalities for community-based management and rehabilitation of peatlands which will be developed further through the current project linked to the development and implementation of National Action Plans.

With regard to specific support from GEF – funding was first provided in 1998, in response to the major El Nino-induced forest fires in Se Asia UNEP-GEF provided a grant of US$750,000 for a project on Emergency Response to Combat Forest Fires in Indonesia to Prevent Haze in South East Asia. This completed project focused on development of monitoring and early warning systems and generated some important outputs including assistance for development of regional monitoring mechanisms and the regional transboundary haze agreement as well as support for a range of capacity building activities. In 2001 UNDP-GEF initiated a project on sustainable management of peatlands in Malaysia focussing on three sites important for biodiversity conservation. This on-going project is developing good models for integrated management of peatlands in the target sites but does not work outside Malaysia. In 2003 UNEP GEF supported a global targeted research project on Integrated Management of Peatlands for Biodiversity and Climate Change. This project has supported (with an allocation of about $250,000) pilot activities in Indonesia and assisted

regional cooperation in Se Asia. The project has facilitated the development of the ASEAN Peatland Management Initiative and initiation of the ASEAN Peatland Management Strategy – both of which provide an important basis of the current project. The UNEP-GEF project will be completed in Mid-2006 – prior to the initiation of the current project. These three GEF supported activities provide a good basis for the development of the current project. Lessons learned from the earlier interventions will guide the design of the future project.

Need for new intervention

To date efforts in the region to address the increasing problems of peatland fires and associated transboundary haze and greenhouse gas emission have focussed mainly on early warning and firefighting approaches. Although significant progress has been made in this area with the guidance of the ASEAN (Association of Southeast Asian Nations) Secretariat and member countries and assistance of the international community – the problem of peatland fires still persists and in some countries has worsened. In recent years there has been growing recognition that peatland drainage and degradation is one of the main root causes of regular land and forest fires, and in order to prevent fires in the future it is important to address the root causes of degradation – such as the inappropriate development strategies, subsidies and incentive measures which encourage peatland drainage and degradation, inappropriate water management systems or dis-empowerment of local communities. There have been a number of small-scale site based activities to develop or test techniques for peatland rehabilitation and management however these have not been fully documented or scaled up.

ASEAN member countries have established an ASEAN Peatland Management Initiative in 2003 and are currently developing an ASEAN Peatland Management Strategy (complemented by National Action Plans) to guide the sustainable management of peatlands over the period 2006-2020. The current project aims to support the implementation of this Strategy, by strengthening regional and national capacity, supporting actions to prevent peatland degradation, demonstrating restoration options and sustainable management strategies and empowering local communities to take the lead in resource management.

GEF support for this activity will be strategic in stimulating multi-stakeholder contribution and partnership in the activities as well as supporting the development of longer-term sustainability and replicability mechanisms.

It is planned that this project will assist countries in the region to implement priorities identified in the ASEAN Peatland Management Strategy and associated national action plans by assisting countries to undertake strategic activities at the national or local level as well as provide support and exchange activities in a regionally coordinated multicountry manner.

A.2 Project Goals & Objectives

Goal

Reverse the loss and degradation of peatlands in South East Asian countries to avoid negative impacts on socio-economy, health and environment through capacity building and sustainable peatland management practices.

Objectives

Objective 1. Strengthen capacity for sustainable peatland management

Objective 2. Minimise the degradation of peatlands in relevant South East Asian countries

Objective 3. Rehabilitate and sustainably manage targeted peatlands

Objective 4. Enhance the livelihood of local communities through sustainable peatland management

A.3 Project Outputs & Outcomes

The indicative outputs envisaged for respective objectives are as follows:

Objective 1. Strengthen capacity for sustainable peatland management

- ASEAN Peatland Management Strategy adopted and being implemented
- National action plans for peatland rehabilitation and sustainable use approved in selected countries

- Institutional frameworks for peatland management strengthened
- Long term innovative mechanisms to generate resources to prevent peatland degradation established.
- Programmes for awareness raising and exchange of experience and best practices operating effectively

Objective 2. Minimise the degradation of peatlands in relevant South East Asian countries

- Frequency and extent of fires in peatlands reduced through efficient prevention and monitoring strategies.
- Level of protection of peatlands critical for biodiversity enhanced.
- Best management practices for the restoration or rehabilitation of degraded peatlands documented, endorsed, and being applied.
- Private sector peatland managers (oil palm and pulp and paper plantations, logging licensees) adopting sustainable management approaches

Objective 3. Rehabilitate and sustainably manage targeted peatlands

- Demonstration and pilot sites established and promoted for sustainable peatland management
- Peatland rehabilitation techniques tested and promoted
- Sustainable management options for peatlands effectively demonstrated

Objective 4. Enhance the livelihood of local communities through sustainable peatland management

- Local government and communities strengthened and empowered to manage peatland resources in pilot sites
- Effective microfinance and incentive mechanisms for local communities operating in target areas
- Communities adopting alternative livelihoods based on sustainable peatland management

The overall expected outcomes from the project would be:

- Effective collaborative actions at regional and national level to prevent peatland degradation and promote sustainable use
- Strengthened policies and regulations to safeguard integrity of peatlands
- Self sustaining financial mechanisms for peatland management
- Reduction of peatland fire incidences and associated smoke-haze pollution and GHG emissions
- Improved protection of biodiversity and carbon storage functions of targeted peatlands
- Improved socio-economic well being and environmental stability of pilot areas
- Replication of experience and lessons learned from pilot sites
- Selected peatland communities adopting sustainable peatland management practices
- Improved community livelihood and poverty reduction and environmental stability in target areas
- Increased level of funding available for sustainable peatland management
- Improved implementation of Convention to Combat Desertification, Convention on Biodiversity, and UN Framework Convention On Climate change.

A.4 Geographic Scope

In terms of geographic focus, it is expected that the project will be most active in field activities in those countries with significant peat resources namely Indonesia, Malaysia, Thailand, and Viet Nam. However, regional activities for information exchange, capacity building, sharing of resources, early warning and monitoring are anticipated to involve all ASEAN member countries to some degree as with the existing ASEAN activities. Countries in the region which are not eligible for GEF support (Singapore and Brunei Darussalam) will provide their own funding for on-the-ground and capacity building activities and in addition, they will make a contribution to multicountry/regional activities.

B. COUNTRY OWNERSHIP

B.1 Country Eligibility

The main selected countries of the ASEAN region are eligible for GEF assistance by virtue of the fact that they have ratified the appropriate conventions and agreements (see Table 1).

Table 1 Dates of ratification of relevant Conventions and agreements

ASEAN Countries	UNFCCC	CBD	UNCCD	ASEAN Agreement on Transboundary Haze Pollution
Malaysia	13/7/1994	24/6/1994	25/6/1997	3/12/2002
Indonesia	23/8/1994	23/8/1996	31/8/1998	-
Viet Nam	16/11/1994	16/11/1994	25/8/1998	24/3/2003
Thailand	28/12/1994	29/01/2004	7/3/2001	10/9/2003
Brunei Darussalam*	-	-	4/12/2002	27/2/2003
Singapore*	29/5/1997	21/12/1995	26/4/1999	13/1/2003

* Countries not eligible for GEF support.

B.2 Country and Region Drivenness

The proposed activities are in line with national and regional policies and priorities as described below:

Brunei Darussalam
Brunei is well endowed with large areas of pristine peatland. Peat swamp forests cover about 20% of the land area of Brunei. The greater proportions of peatlands occur at coastal area with low altitude from sea level to about 50 metres above mean sea level. Interest to ensure the sustainability of these resources and the environment by relevant authorities has been translated into several laws and public policies. A more consistent protection policy was were adopted in the Fifth National Development Plan (1982-1987) where several laws, regulation, policies, strategies and guidelines have been introduced regulate natural resources based on sustainability principles including the need to conserve and protect the high biodiversity of Brunei forests including peat swamp forests. Peatlands in Brunei especially shallow peatlands in the coastal areas and those impacted by road and pipeline development have been significantly degraded in recent years and peatland fires are becoming a regular and significant problem.

Indonesia
Indonesia has more than 25 million ha of peatland and it forms one of the most important forest resources in the country. In recent years approximately 50% of the peatland has been degraded through unsustainable logging, drainage and fire. Hence measures to improve the sustainable management of peatlands are a high priority for the country. Peatland management is currently addressed in Indonesia by a range of different agencies under the Ministries of Agriculture, Environment and Forestry as well as local government. Various policies and laws state that any development on peat areas will undergo an Environmental Impact Assessment (EIA), peat at or exceeding 3m depth will be classified as protected areas, and any activities on these areas shall be reviewed for any negative impacts. The issue of peatland fires and sustainable use has been recognised in the recently revised National Wetland Strategy and the National Haze Action Plan. In recognition of the seriousness of peatland degradation, it has been proposed that a national strategy and action plan on peatlands be developed involving both central and local government agencies.

Malaysia
Malaysia has about 2.5 million ha of peatland which is valuable for biodiversity conservation, water management, forestry and agriculture purposes. The frequency of peatland fires have increased significantly in recent years and this is a major cause of concern for federal and affected state governments. At federal level, the main institutions related to peatland management in Malaysia are linked to the Ministry of Natural Resources & Environment (MoNRE) namely the Forestry Department Peninsular Malaysia, Department of Environment, Department of Irrigation and Drainage, as well as the Ministry of Agriculture. In addition, various universities and non-governmental organisations (NGOs) have been active in peatland assessment or conservation.

Management of peatlands in Malaysia falls under the remit of the different state governments, with the lead normally taken by the state forest departments.

There are no specific existing policies for peatlands in the country. However separate national policies have been developed for biodiversity, forestry, agriculture and wetlands and all these deal with different aspects of peatland management. The need for a specific strategy or action plan related to peatland has been proposed by some agencies.

Thailand
In Thailand, peatlands are found in about 20% of provinces – mainly in the south of the country. Although the total area is relatively small, peatlands are recognised as particularly important for the conservation of biodiversity as well as the provision of livelihood to local communities. A number of protected areas have been established to protect intact peatlands, but significant effort is needed to address the problem of fire and the degradation of the remaining peat resources. The main central government agencies in Thailand related to peatlands include the Ministry of Natural Resources & Environment (Royal Forest Department, Department of National Parks, Wildlife and Plant Conservation, Office of Natural Resource and Environmental Policy and Planning) and the Ministry of Agriculture & Cooperatives. Other related frameworks include educational institutions, civic groups and NGOs.

Currently, there is no policy specifically for peatland management. However maintenance of peatlands are addressed by other policies, and plans including the Ninth National Economic Social development Plan (2002-2006), National Forest Policy, Wetland Policy, and the Work Plan on Wetland Management for 2003-2007.

Singapore
Singapore has limited forest land and peatlands and is not susceptible to large scale forest fires. It is however, affected by transboundary haze caused by forest land and peat fires in the region. The National Environment Agency in Singapore operates an early warning system for the monitoring of forest fires and smoke haze in the region based on satellite imageries derived from meteorological and environmental satellites as well as other meteorological information. In addition, it operates a network of air quality monitoring stations to provide measurement of the air quality to determine the intensity of the haze. It has actively supported the development of cooperation on fire prevention and peatlands.

Viet Nam
Peatlands in Viet Nam occur mainly in the Mekong delta in the south of the country. Intact peatlands have been included in protected areas, but these have been badly affected by fire in recent years. The main institutional frameworks related to peatland in Viet Nam include the Ministry of Natural Resources & Environment and Ministry of Agriculture & Rural Development. Currently there is no specific policy on peatland fire prevention and control but other applicable policies exist. They are inclusive of Law on the Protection & Development of Forest (1991), Law on Fire Prevention & Control (2001), and a few Orders and Decision on fire prevention and control and capacity strengthening.

ASEAN region
The proposed project links very closely with appropriate national, regional and global policy frameworks. The ten countries of the ASEAN region have recognised the socio-economic, health, biodiversity and climatic impacts of the degradation and unsustainable use of peatlands in the region which result in annual fires in peatlands in SE Asia and significant transboundary smoke haze pollution. In December 1997, the ASEAN countries adopted an ASEAN Regional Haze Action Plan (and subsequently developed National Haze Action Plans). There are three primary objectives of the RHAP, i.e. (i) prevent land and forest fires through better management policies and enforcement, (ii) establish operational mechanism to monitor land and forest fires, and (iii) strengthen regional land and forest fire fighting capability with other mitigation measures.

In 2002, the ASEAN member countries signed a regional ASEAN Agreement on Transboundary Haze Pollution (see Annex 1) which contains provisions on monitoring, assessment and prevention, technical cooperation and scientific research, mechanisms for coordination, lines of communication, and simplified customs and immigration procedures for disaster relief. In mid 2002, the ASEAN Ministerial Meeting on Haze formally recognised the importance of addressing the issue of peatland degradation in the region and initiated the development of the ASEAN Peatland Management Initiative (APMI) which was adopted by the senior officials in February 2003. Currently the governments of the region are working together to develop an ASEAN Peatland Management

Strategy (APMS) to outline management and protection measures over the next 15 years (2006-2020). This will be complemented by national peatland management strategies and action plans in focal countries. Peatland issues have also been highlighted in national strategies for wetland management, biodiversity, climate change, forests and land degradation in various countries in the region. All of these policies, action plans and programme act as a framework for the implementation of the project. In addition the project will operate within the overall Declaration of ASEAN Concord II (Bali Concord II) and contribute to the environmental objectives of the ASEAN Socio-Cultural Community (ASCC) which form the framework for long-term regional cooperation adopted by the ASEAN governments in October 2003.

Although ASEAN countries do not have collective nor comprehensive regulations for peatland protection against land degradation and fire, there are specific laws requiring environmental protection for wetland, wildlife, forestry and fire prevention. This project will work on strengthening those regulations and their implementation to improve management of peatlands and prevention of further degradation.

GLOBAL FRAMEWORKS

This proposed project is also in line with international policy frameworks, including the Convention on Biological Diversity, United Nations Framework Convention on Climate Change and United Nations Convention to Combat Desertification.

Convention on Biological Diversity (CBD)

This proposed project will aid in implementing the objectives adopted under the Convention on Biological Diversity (CBD). In particular it will contribute to the implementation of CBD Decision VI/2 on Biological diversity of inland waters which includes management of peatlands, Decision VI/12 on the Ecosystem Approach, and Decision VI/22 on Forest Biological Diversity. The importance of work on peatlands in relation to biodiversity and climate change was also highlighted by the parties to the Convention through Decision VII/15 on Biodiversity and Climate Change.

United Nations Convention to Combat Desertification (UNCCD)

The objective of UNCCD is to "...combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, … supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in the affected areas." Hence, aiming to address land degradation issue in the South East Asia region, the project will contribute to the implementation of the Convention to Combat Desertification by establishment of an integrated regional approach in achieving sustainable development, and at the same time rehabilitating degraded forest and counter degradation.

United Nations Framework Convention on Climate Change (UNFCCC)

The proposed project will support in global efforts to reduce the net emissions of greenhouse gases (GHG) under the framework of the UNFCCC. In the ASEAN region, peatlands are one of the main sources of GHG emission as a result of peat decomposition as well as fire which release large amounts of carbon dioxide. The work of the project to reduce the degradation of peatlands and support rehabilitation will therefore contribute significantly to convention implementation. The project will also contribute to the development of national strategies for adaptation to climate change in the respective countries. One of the predicted climate change impacts in the region is the intensification of the El Niño cycle leading to longer and more severe droughts in the region. This in turn may enhance the frequency and severity of peatland fires unless appropriate preventive measures are intensified.

C. PROGRAM AND POLICY CONFORMITY

C.1 Program Designation and Conformity

This project relates to Operational Programme on Sustainable Land Management (OP#15) and addresses GEF strategic priorities:

- SLM-1 Targeted capacity building
- SLM-2 Implementation of innovative and indigenous sustainable land management practices

Compliance to GEF's OP#15

The proposed project would incorporate the following approaches which fully comply with the GEF operational objectives on Sustainable Land Management (OP#15).

1. Capacity building at local, national and regional levels that focus on country–driven activities aimed at creating appropriate enabling environment and institutional capacity to support sustainable peatland management in the long run.
   - Mainstreaming sustainable peatland management into national development priorities, such as formulation of national action plans for peatland conservation, rehabilitation and sustainable use.
   - Integration of the national action plans identified into existing strategies and action plans for UNFCCC, CBD and UNCCD.
   - Strengthening of participatory institutional mechanism and capacity for integrated peatland management at national and local levels and across sectors as a contribution to improving livelihood, ecosystem stability, functions and services
   - Strengthening of information management systems to support decision making at the national and local levels on integrated land use planning and management with reference to peatlands and its resources
   - Dissemination and replication of good peatland management practices, technologies, and lessons learned

2. On-the-ground intervention to address peatland degradation that comprise packages of interventions to improve both livelihood and economic well-being of local people and to preserve or restore ecosystem stability, functions, and services through sustainable peatland management.

3. Promote sustainable agriculture and forest management with the involvement of crop diversification to reduce risk of failure (in the case of peatland fire), improvement in water management, improved access to credit, extension and micro credit schemes. These interventions would also have additional benefit related to conservation of biological diversity, and reduction in carbon dioxide emissions (due to peat burning).

4. Development of community based management arrangement, replanting and minimising agriculture expansion. Pilot activities that compensate communities that protect peatland ecosystem stability, functions and services.

This project also relates to the following GEF Strategic Priorities:

- Biodiversity – BD4 Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues
  - Rehabilitation of degraded habitat
  - Conservation and sustainable use
  - Policy and legislation reform
  - Private sector participation
  - Income generation
- Integrated Ecosystem Management (OP12)
  - Conservation and sustainable use of biological diversity
  - Reduction of net emissions and increased storage of greenhouse gases in terrestrial and aquatic ecosystem
  - Conservation and sustainable use of water bodies, including watersheds, river basins and coastal zones

C.2 Project Design

C2.1 Project design approaches

This project would take on a coordinated multi-country approach in solving peatland degradation problems in Southeast Asia. This is because countries with significant peatlands in this region share the same root causes of peatland degradation, are faced with similar impacts of peatlands degradation (peat fire and associated haze), and are also confronted with the same challenge for sustainable peatland management. Besides targeting at the regional level, the project also targets on-the-ground implementation that would benefit both the local communities as well as the local government in promoting sustainable peatland management. This can be obtained through innovative and pilot studies/projects on alternative livelihood, water management, fire prevention and control, etc. Realising the importance of linking the project with other existing or past projects with similar nature, the experiences and lessons learnt from them could help in fine-tuning some

methodologies in the implementation of this proposed project. Involvement or consultation with the private sector is also one of the key approaches this project will embark on. Large areas of peatland are managed by private sector but lack of understanding about appropriate management approaches as well as perverse incentives encourages unsustainable approaches. Another core approach is targeting on the alleviation of poverty of peatland dependant communities.

Six key approaches have been followed in the design of the project namely:

i. Coordinated Multi-country approach

An analysis of issues and needs was undertaken by ASEAN Secretariat in the South East Asian region and it illustrated that the problems facing peatlands in SE Asia are common among the different member countries. As such, benefits can be gained by sharing experiences and lessons learnt in the region. In addition, the degradation of peatlands in one country has major negative environmental and social impacts on other countries in the region through transboundary smoke haze pollution. Furthermore the economies of countries in the region are interlinked and many large projects to drain or develop peatlands in one country may be managed or funded by companies in neighbouring countries. This regional inter-linkage has been the basis for the countries of the region to establish a series of mechanisms including the ASEAN Peatland Management Initiative - which in turn forms the basis for the regional framework for the GEF intervention. Two of the partners in the project are Singapore and Brunei Darussalam – although they are not eligible for GEF funding they have agreed to participate and cover their costs from other resources. These two countries are very active in supporting ASEAN activities related to peatlands in the region – hence their involvement will be important and will also serve as a model for other non-GEF eligible countries to be involved in coordinated multi-country interventions.

ii. On-the-ground implementation

A key principle for the design of the project is that it must lead to direct changes on-the–ground rather than address only policy and coordination issues. This is based on the belief that the on-the-ground problems are severe and need to be solved urgently. There is also a clear understanding that in order to correct policy failures, there is a need to have practical on-the-ground demonstrations of peatland rehabilitation and sustainable use. As a result, the project design has incorporated establishment of demonstration sites and pilot projects as well as promoting sustainable use and livelihood for peatland dependant communities. It is also important to establish appropriate channels of communication to link local communities, government and other stakeholders in peatland management and fire prevention and control.

iii. Creating linkages to other interventions and cooperation frameworks

The intervention has been designed so that it builds on and complements other completed, ongoing and planned interventions related to the management of peatlands in the region. Linkages are envisioned with other related projects in the region (such as the GEF funded Conservation and Sustainable Use of Tropical Peat Swamp Forests and Associated Wetland Ecosystems in Malaysia) Lessons learned from these projects would be taken into consideration during the process of implementation. The intervention is linked with the ongoing and planned interventions by government agencies since it is integrated with the existing ASEAN regional framework for peatlands (i.e. the APMI) which links together a broad range of ongoing peatland related activities. Linkages will also be enhanced by taking a multi-stakeholder approach in development of strategy as well as implementation of action plans. Linkages are also being made with global frameworks such as CBD, UNFCCC and UNCCD.

iv. Linkage to private sector

One of the proposed innovations in the project is a proposed linkage to the private sector, which is active in the region in utilising peatland and managing its resources. This approach will include involving the palm oil community through the ongoing the Round Table for Sustainable Palm Oil (contributing to the criteria development for oil palm on peat soils) as well as working with the timber and non-timber forest products sector who are involved in harvesting or processing resources from peat swamp forest, as well as developing plantations of fast growing tree species on peatland areas. Linkages will also be made with the tourism and aviation industries in the region which are impacted by smoke from peatland fires, as well as the insurance industry which are facing potentially increasing claims for peatland fire related losses.

v. Addressing poverty and community livelihood issues

The protection and sustainable management of peatlands in SE Asia is closely linked with the issue of community livelihoods and poverty. If local communities living in or adjacent to peatland areas

benefit from the natural goods and services provided by peatlands and can be empowered and supported to protect or rehabilitate peatlands, they can play an important role in the rehabilitation and sustainable use of peatland resources. If local communities are marginalised and disempowered, they may have a more negative impact on the peatlands. It is therefore a key strategy in the project design to incorporate mechanisms to empower and support peatland dependent communities in the sustainable use of these areas.

vi. Establishment of innovative financial mechanisms

In order to support the sustainability and replication of the intervention the project will explore the development of various innovative and long-term financing mechanisms. These will include the development of a multi-stakeholder trust fund – to receive contributions from the international donor community and well as ASEAN countries and other sources. This trust fund will provide a mechanism for the longer term implementation of the ASEAN Peatland Management Strategy. Other sources of financing to be explored are peatland polluter-pays or user-pay schemes – whereby private sector developers of plantations on peatlands as well as purchasers of peatland-related projects may contribute levies or charges to appropriate financing schemes. Options of partnership with the insurance sector will be explored to develop transboundary haze insurance – with part of the premium being allocated for fire prevention activities.

C.2.2 Problem Statement

The main problems/issues and main causes of peatland degradation in SE Asia are as follows:

i. Policy and institutional issues

- *Policy conflicts and weaknesses*
  In most countries there is no harmonised policy related to the management of peatlands. Peatland use is often governed by separate policies related to forest management, agriculture development, environmental protection and nature conservation. There are frequently gaps or conflicts between such policy frameworks. For example in several countries in the region, incentives are still provided to drain peatlands for forestry or agricultural purposes – even when such peatlands are of marginal agricultural value or provide more valuable ecological services in their natural state and it is recognised that drainage is a root cause of fires.

- *Weak or unclear institutional arrangements and capacity for peatland management*
  One principal constraint in peatland management in the region is weak institutional arrangements and capacity for peatland management. Often the responsibility for management of one peatland area is divided among a broad range of sectoral agencies (forestry, agriculture, environment) as well as between central and local government and the community. Lack of holistic planning leads to overlaps, duplication and omissions. There is frequently a lack of understanding of the ecological complexity of this system and failure to comprehend the importance of its natural functions. In addition even when integrated management plans for peatlands are prepared or common regulations are made then lack of capacity affects their effective implementation.

- *Inappropriate land and natural resource use planning*
  Land conversion of peatlands for the development of plantation, agriculture and urban areas is a large-scale issue. Planning decisions are frequently made without an adequate understanding of the ecological, hydrological, socio-economical and other impacts. Peatlands in the region frequently occur in large units (30,000-500,000ha in size) with all parts of each unit interconnected with one another by a common soil water body. Thus, any development activity in one part of the unit affects the water resources, peat soil and vegetation in another part of the unit. Sometimes the proposed development is totally not feasible or appropriate for the area chosen – such as agriculture or urban development on deep peat.

- *Insufficient information on extent, status and suitability of peatlands for different purposes*
  One of the constraints to effective land use planning and management is a lack of information on the extent, status and suitability of peatlands for different uses. Apart from a few examples, most peatland components and functions are still poorly understood and/or poorly quantified compared with other ecosystems. Available information is sometimes inadequate to assess the ecological consequence of developing a particular area without further feasibility studies.

ii. Peatland management issues

- *Inappropriate or over-drainage of peatlands*
  Inappropriate drainage or over-drainage of peatlands is one of the major causes of peatland degradation in the region. Almost all kinds of development on peatland involve drainage on the peatland itself and/or its surrounding area, subsequently altering its hydrodynamic equilibrium. It also carries the risk of over-drainage and excessive drying leading to irreversible damage and deleterious impact on the natural communities. Excessive drying will also increase the frequency of peatland fires. There is frequently a lack of understanding on the complex peatland hydrological system.

- *Over-exploitation of peatland natural resources*
  Over exploitation of peatland resources may involve both legal and illegal logging problems which may lead to high extraction levels or significant changes to the ecology or hydrology of the peatland system. This may include use of inappropriate techniques for extraction of timber – such as the use of heavy equipment and drainage channels or high levels of damage to non-target tree species. Non-timber product extraction is often unregulated and may also lead to over-extraction.

- *Peatland fires and transboundary smoke haze*
  The most important management issue of regional importance is the transboundary smoke haze from peatland fires. Peat fires in the region almost always occur as a result of human intervention. The worst occurrence of fires in peat swamp in the last decade was the vast fires of 1997-98 that ravaged large areas of peatland landscape for several months during the dry season. Drainage and over-exploitation of peat often become the root causes of peat forest/peatland fire. This may be exacerbated by poor management control and lack of mechanisms for fire prevention and control. The El Niño induced droughts are also a significant contributing factor to major fires in the region.

- *Loss of carbon storage*
  The high level of organic carbon in peatlands makes them significant carbon stores. Peatlands of the region are thought to store up to 5% of all carbon stored on the world's land surface. The clearance, drainage and burning of peatland in the region is now leading to significant carbon emissions which are considered of global significance.

- *Loss of biodiversity*
  Due to degradation of peatlands caused by land clearance, drainage and increased frequencies of fire, there is a loss of biodiversity of the region's peatlands. Apart from negative impacts on biodiversity of global significance, the loss of biodiversity would also eliminate options for sustainable use of biodiversity by local communities.

iii. Community-based issues

- *Loss of livelihood options for local communities*
  Local communities often derive considerable benefit from peatlands and their resources to earn a livelihood e.g. collecting medicinal plants, harvesting non-timber forest products, fishing, small scale farming, etc. If conducted at appropriate scale, these activities can cause little or no significant impact on peatlands. Traditional knowledge and practices have often been applied to ensure sustainability. However, when large scale extraction or conversion of peatland resources occurs (often driven by outside agencies) the local communities are often impacted and lose access to their traditional resource base. This in turn would lead towards or elevate poverty.

- *Unclear access rights and marginalisation of local communities*
  Local communities living in or adjacent to peatlands may become marginalised in terms of the management of the resources. Often national legislation does not recognise the rights of such communities to access the resources and this creates a constraint when seeking to strengthen community stewardship over resources.

- *Insufficient income generation opportunities to peatland communities*
  Peatland communities often are below the poverty level and have insufficient opportunities to generate income or gain access to credit services to support sustainable management opportunities. This may be exacerbated by unclear land tenure situations or lack of asset base which precludes access to traditional credit opportunities. Income generation from peatland products is often hampered by poor market access or domination of middlemen.

C.2.3 Current Baseline Scenario without GEF Interventions

It is envisaged that without the proposed intervention through the project by GEF, co-funders and other stakeholders there will be a range of problems which will continue in the future:

1. Degradation of intact peat swamp forest
   It is anticipated that without specific interventions, intact peat swamp forest will continue to be degraded through continual over-exploitation or illegal harvesting of natural resources such as timber. In addition there will be continued development of agriculture and infrastructure projects in and adjacent to the forest, threatening integrity of peat ecosystem and resulting in the loss of ecological support services (ie. flood mitigation, saline water intrusion prevention, sediment and toxic removal, groundwater recharge, micro-climate regulation etc).

2. Loss of globally important peat swamp biodiversity
   Peat swamp forest and peatland possess a distinctive ecosystem and therefore possess unique biodiversity of flora and fauna that are specially adapted to this type of environment. Southeast Asia peat swamp forest vegetation has been recognised as an important reservoir of plant diversity (Whitmore, 1984). Peat swamp forest has a relatively high diversity of tree species. For instance in Indonesia, more than 300 tree species have been recorded in swamp forests of Sumatra, some of which are becoming increasingly rare. Many of the plants are restricted or endemic to this habitat e.g. 75% of the tree species found in peat swamp forest in Peninsular Malaysia is not found in other habitats and some of these species have relatively restricted distribution.

   Peat swamp forests are home to a number of rare and endangered mammals such as Sumatran tiger (*Panthera tigris sumatranus*), tapir (*Tapirus indicus*), Asian elephant (*Elephas maximus sumatrensis*), lesser one-horned rhino (*Rhinoceros sondaicus*) and orang utan (*Pongo pygmaeus*). Recent studies in Kalimantan have indicated that peat swamp forest is one of the last strongholds for orang utan (Meijaard, 1995; Rieley, *pers. com*., 2001). Peat swamp forest also supports a diverse bird community including endangered species such as hornbills and the short-toed coucal. Black-water rivers (peatland rivers) are important fish habitats that often have a higher degree of localised endemism than other rivers, and are important source of aquarium fishes.

   The removal of at least one or two of these specially-niche species could disrupt ecological systems and destabilise the ecosystem. The biodiversity available in peatlands are also a source of food, medicine and livelihood for local communities. The depletion or loss of these biodiversity values will have negative impacts on local communities dependent on peatland resources and contribute to poverty.

3. Increased carbon emissions and loss of carbon stores
   Peatlands are considered to be a globally significant store of carbon containing 20-35% of the carbon on the terrestrial biosphere/soils. While they only cover three percent of the land surface they store 30 percent of the carbon. Tropical peatlands store 2-6000 t C/ha compared to the average of 270 t C/ha on average in the world's forest ecosystems. However, this storage function is now being reversed due to human intervention. Activities related to land conversion and fire incidences release this stored carbon to the atmosphere, and in significant amounts it can have detrimental implications on climate change. Drainage releases 50-200 t C/ha/yr and fire may release 500-1000 t C/ha/fire. In 1997-98 it has been estimated that peatlands in the region released between 1-2 billion tonnes of carbon as a result of El-Nino induced fires.

4. Further degradation of already damaged peatlands area
   Peatlands that have already been degraded in the past are likely to be further degraded without specific interventions in the future. The 2.5 million ha of peatlands, which have already burnt over the past 10 years, are predicted to burn again in future El Niño events. After repeated burning, forest will be degraded to open grassy swamp. A significant proportion of the 10 million ha of peatland forests which have been opened up by legal and illegal logging as well as drainage over the past 10 years are expected to be impacted by fire related to land clearing or future El Niño events. Without specific support and guidance, it is envisioned that there will be no or very limited effort in rehabilitation of peat swamp forest. Degraded peat

swamp forests sites without rehabilitation measures will either be degraded further or be converted into other land use, hence a total loss of peatland ecosystems.

5. Peatland fires and associated smoke haze will remain constant or increase
   In the past 10 years 2.5 million ha of peatland were burnt releasing 2-3 billion tonnes of carbon dioxide and causing an estimated $10 billion of damage in the region. Without progress to prevent further degradation of peatlands, it is anticipated that the extent and integrity of fires will remain the same or increase in future years. The peatlands that have already burnt have sufficient fuel for at least 50 more years of fires with similar intensity as the earlier fires. Unless management changes are made, peatland fires in the region will continue to have a negative impact on health, tourism, transport and other economic sectors in the region.

6. The livelihood of communities living in peatland areas will be stagnant or decline
   The livelihood of communities living in and adjacent to degraded peatland will continue to decline as problems related to peatland degradation become more severe such as flooding, soil subsidence, increasing fire frequency and smoke pollution, and declining timber and non-timber forest products. As such, the incidence of poverty will increase. Community members will become more involved in unsustainable or illegal activities.

7. Institutional capacity for peatland management will not improve
   With weak institutions and poor coordination, the problems of peatland management will not be adequately addressed. There will be no concerted efforts for sustainable peatland management, and regional framework and action plans will not be adopted. Poor policies concerning land use that threaten peatlands will continue to be implemented.

C2.4 Alternate Scenario with GEF Interventions

1. Reduced degradation of intact peat swamp forest
   It is anticipated that with the intervention there will be a decline in the rate of loss of intact peat swamp forests with an increasing area of peatland included in protected or sustainable use reserves. The natural functions and ecosystem integrity will be better protected and biodiversity conserved. The number of large-scale conversions of peat swamp forest for development will decline or stop.

2. Protected or sustainable usage of biodiversity in peat swamp forests
   Through support from the project, it is anticipated that endangered or exploited floral and faunal species will be protected if endangered or exploited in a sustainable manner. Apart from keeping the ecological systems and ecosystem intact, it will also extend the livelihood of local communities that depend on peatland resources, increase the standards of living and reduce poverty.

3. Reduce the emission of greenhouse gasses and maintain carbon stores
   Successful sustainable management practices and rehabilitation of peatlands will mitigate climate change and its impacts. Project activities such as canal-blocking to elevate the water-table in degraded peatlands will reduce fire incidences and subsequently less carbon will be released to the atmosphere.

4. Rehabilitation of degraded peatlands area initiated
   It is anticipated that with the support from the project, the rehabilitation of degraded peatlands in the region will be initiated. The further degradation of formerly burnt areas will decrease or be minimal and the re-occurrence of fire in pilot rehabilitation areas will be significantly reduced. In some degraded sites, there will be some return of natural vegetation cover and some natural functions will return.

5. Decline in the extent and severity of peatland fires and associated smoke haze
   Following the rehabilitation of degraded areas and enhanced fire prevention and control, there will be a decrease in incidences of peat fire and associated haze problem. Better predictions and warning systems will reduce the impact on major industries in the region and improve health and safety of affected populations.

6. The livelihood of communities living in target peatland areas will be maintained or increased
   Enhanced knowledge and capacity for local communities on sustainable use of peatlands combined with empowerment of local governments and communities to protect peatlands resources will ensure more constant supply of goods and services from the peatlands.

Consequently, this will lower the risks from fire and floods and increase per capita income of local communities.

7. Institutional capacity in peatland management will be enhanced
   Establishment of regional strategies and national action plans will empower appropriate regional and national institutions to support sustainable management of peatlands and reduce the rate of decline in peatland resources. Improved cooperation and communication among countries will lead to sharing of experiences and best practices as well as joint implementation of measures to reduce peatland degradation and associated fires and haze.

C.3 Sustainability

The project will focus on specific needs by the ASEAN Member Countries already identified by the focal points of the APMI such as the urgent need to address issues of peatland fire prevention and control, sustainable use, peatland rehabilitation, awareness/education/information exchange, capacity building/ training, peatland inventory, research, pilot or demonstration projects. Since the activities will be directly addressing the priorities identified by the ASEAN countries and included in long-term agreed strategies such as the ASEAN Peatland Management Strategy (2006-2020), the governments will have a commitment to implement activities both during and following the project intervention period.

The sustainability of the project is further assured by the strong commitment of all ASEAN Governments in tackling the issue of fires and associated transboundary haze in the region. With the ASEAN Haze Technical Task Force (comprising of high level officials from Ministries of Environment and Natural Resources) serving as the focal points for this initiative of APMI, the focal points would play an important role in mainstreaming sustainable peatland management into national planning processes, and ensure continued allocation of natural resources to address peatland degradation as well as providing a vehicle for leveraging external support. They will also ensure that with a strengthened enabling policy and legislative framework in addition to better developed institutions and incentives, local control over natural resources will continue post-project completion engendering long-term positive impacts. Also, capacity building at all levels will facilitate improved response capacity to changing circumstances such as potential climate change effects.

The institutional sustainability will be ensured by the direct involvement of the stakeholders (national, state, local, private, NGOs, etc) in all stages of the project and empowering them through the capacity building component of the project. Experience elsewhere has shown that empowerment of local communities, coupled with maintenance of some economic benefits, are the best assurances for long-term sustainability of a project.

With regard to financial sustainability, it is envisaged that the project will explore a number of regional or national funding mechanisms including polluter-pay and user-pay schemes as well as multi-donor trust funds to support the sustainable management of peatlands in the regions. The pilot projects will provide models to show the feasibility, techniques and economic viability of restoring peatland areas and this will lead to the allocation of financial and other resources by the respective governments and other agencies.

C.4 Replicability

a. Replication of on-the-ground interventions
With the completion of the project, it is envisaged that there would be established pilot and demonstration sites. These specific sites would showcase specific areas of best peatland management in relation to fire, water management, biodiversity conservation, rehabilitation trial, etc. Taking these sites as an example, more sites could be identified and established for demonstration purposes within the country itself. To support the process of replication, manuals, guidelines, training materials will be developed during the project.

b. Replication of country activities
The project is able to be replicated and adapted to cover more countries and implement more on-the-ground interventions. The proposed project is taking the key countries such as Malaysia, Indonesia and Viet Nam as focal countries where outputs are expected to be materialised upon completion of the project. However, these same activities could also be replicated to other countries in the ASEAN region as well as in different regions taking into consideration the political, social and environmental situations. Replicability of the project activities will be enhanced through

use of the established ASEAN regional information exchange mechanisms and the South East Asia Peat Network and associated Peat-Portal web site.

c. Replication of coordinated multi-country activities

The coordinated multi-country concept modality, mechanism designed and applied in this project could be replicated with adaptation for other regions such as Southern America and North East Asia. China, Russia, Mongolia and Japan face common problems of high altitude peatland degradation due to overgrazing and water resource mismanagement. Replication at global level will be assisted through linkage to the Global Peatland Initiative and ongoing activities in the framework of the UNFCCC, CBD, CCD and Ramsar convention.

The mechanism of the project implementation could also be replicated for other common issues in the ASEAN region such as forest or coastal degradation whereby similar approach is taken to develop an initiative, following the development of a regional strategy and followed by action plans for implementations.

This can be a practical mix of integrated institutional strengthening and on-the-ground intervention, coupled with an enhanced political commitment at high government level, adoption of a participatory bottom-up planning approach, and the identification and involvement of other stakeholders in the effort to prevent further degradation of tropical ecosystem.

C.5 Stakeholder Involvement / Intended Beneficiaries

The proposal was prepared based on an extensive process of multi-stakeholder consultations in the region between 2001-2004, which resulted in improved understanding of the status and common issues facing peatlands as well as the establishment of the APMI and the proposed APMS. The preparation process was coordinated by ASEAN Secretariat with the assistance of the Global Environment Centre. The ASEAN Secretariat and the Global Environment Centre (GEC) will coordinate the further development and implementation of the project proposal in conjunction with the following main stakeholder groups:

a) All ASEAN member governments through the appointed national focal points for the ASEAN Peatland Management Initiative as listed below:

- Ministry of Development, Brunei Darussalam
- Ministry of Environment, Cambodia
- Ministry of Environment, Indonesia
- Department of Environment, Science Technology and Environment Agency (STEA), Lao PDR
- Ministry of Natural Resources and Environment, Malaysia
- National Commission for Environmental Affairs, Myanmar
- Department of Environment and Natural Resources (DENR), The Philippines
- Ministry of the Environment, Singapore
- Ministry of Natural Resources and Environment, Thailand
- Ministry of Natural Resources and Environment, Viet Nam

b) Range of government agencies at the national level including agencies responsible for forest management, agriculture, plantations, water resource and river management, environment, research, transportation, and health.

c) Local government and communities in peatland areas

- Local government of selected peatlands sites for demonstration and pilot project establishment
- Peatland communities in project sites

d) Regional Organisations or Networks – for example

- ASEAN Specialised Meteorological Centre
- SEA-PEAT (South East Asia Peatlands) Network

e) NGOs and Community Based Organisations – for example

- Wetlands International
- World Wide Fund for Nature

f) Private Sector

- Palm Oil Plantation industry
- Timber / pulp / paper industry
- Tourism / eco-tourism

- Insurance industry
- Airlines industry

Anticipated Roles of Stakeholders
The anticipated roles of the different groups in the project implementation are described below:

a) ASEAN Member Governments through the appointed national focal points for the ASEAN Peatland Management Initiative
The focal points will coordinate all activities in making sure that the project goals and objectives are being achieved by providing guidance to all relevant stakeholders within the project.

b) National Level Government Agencies
National agencies and institutions will take the lead in the direction of national actions in the framework of agreed national action Plans. They will be directly involved in developing and implementing appropriate policies and plans related to the regional ASEAN Peatland Management Strategy. And will also coordinate activities such as capacity building and training. Another area of involvement will be on the implementation of rehabilitation project (pilot or demonstration) by identifying the area for rehabilitation and the overall plantation and monitoring activities. Being the main stakeholder of forest, national agencies will establish pilot and demonstration sites as appropriate to support peatland rehabilitation and restoration efforts by the countries.

c) Local Government and Communities
The Local Government is expected to play an important role in selected demonstration or pilot project sites to facilitate coordination of activities with other local programmes and ensuring that all activities are being implemented in line with the local government's agenda on development. This will ensure there will be no clash in future on activities being carried out by local government and contribute to the sustainability and replicability of the activities. In countries in the region that have decentralised management of natural resources to the local government – such as Indonesia or Thailand the local government will be expected to play a key role in peatland management.

Local communities in selected project areas are anticipated to play a key role in the protection, rehabilitation and sustainable use of the peatlands in their areas. The project will work to support and empower them to take a lead role in these activities. The project will promote alternative sustainable livelihoods and help to establish appropriate micro-credit and other incentive mechanism to improve of livelihood and at the same time minimize damage to the environment. Reducing the incidence of poverty will be one of the main areas of the project whereby the final goal for improvement of environment quality is for the purpose of sustainability of land for improvement of local livelihood.

d) Regional Organisations or Networks
ASEAN Specialised Meteorological Centre: Based in Singapore, the Centre takes the lead in regional monitoring of hotspots and peatland fires and associated haze within the ASEAN region to aid other ASEAN member countries to implement preventative measures.
SEA-PEAT Network: A network of relevant stakeholders and interested groups concerned with peatland management issues to share and exchange information and experiences towards a sustainable peatland management.

e) NGOs and Community Based Organisations
NGOs (ie Wetlands International, World Wide Fund for Nature, etc) and community-based organisations can be engaged in carrying out specific task related to capacity building, training, providing input to assist national agencies in rehabilitation of degraded peatlands (assessment, training, planting, canal blocking, seedling raising, etc) due to the capability of local language and local expertise.

f) Private Sector
The private sector is expected to be a partner in the project in terms of developing best management practices and criteria for sustainable use of peatlands such as Oil Palm and pulp and paper plantations on peat. In addition they will be involved in developing options for ecotourism as well as processing and marketing of timber and non-timber forest products. The finance and insurance industry will be involved in developing innovative financing and insurance mechanisms such as concessional finance for sustainable use of peatlands, peatland fire and haze insurance etc.

D. FINANCING

D.1 Financing Plan

An indicative GEF contribution of US$5,000,000 is envisaged over a project period of approximately five years (2006-2010) to be complemented by anticipated co-funding of approximately $17,000,000. An indicative breakdown of GEF funding and co-funding is given below (Table 2). This will be refined during the PDF-B stage.

Table 2 Indicative GEF resources and co-funding for indicative project components

Indicative Components*	Indicative GEF Funding	Indicative Co-funding**	Indicative Total
Indonesia	1,200,000	8,000,000	9,200,000
Malaysia	800,000	2,500,000	3,300,000
Thailand	350,000	800,000	1,150,000
Viet Nam	350,000	1,200,000	1,550,000
Multicountry	960,000	2,000,000*	2,960,000
Unallocated/other	300,000	2,500,000*	2,800,000
GEF project management	700,000		700,000
PDFB	340,000	200,000	540,000
Total	**5,000,000**	**17,200,000**	**22,200,000**

* Given that Indonesia followed by Malaysia has the largest area of peatlands, it is anticipated that their respective country components will be larger in size.

** In-kind/ financial contribution – exact contribution to be determined following further consultations during the Block B stage.

D. 2 Co-Financing

Indicative levels and possible sources of co financing are as follows. These will be determined further and confirmed during the PDFB process:

Stakeholder in-kind/ financial contributions
(to be discussed further and determined in Block B period) $5,400,000

- Indonesian Government
- Malaysian Government
- Thai government
- Vietnam Government
- Singapore Government*
- Brunei Darusalam Government*
- ASEAN Secretariat
- Global Environment Centre

* although Singapore and Brunei are not eligible to receive support from GEF they have agreed through the framework of ASEAN cooperation to become involved in the project and contributing to multicountry activities as well as selected national demonstration activities. They have both submitted support letters for the project.

Potential Bilateral and Multilateral Funding Agencies
(to be confirmed during the Block B process) 11,800,000

- IFAD
- Netherlands Government (co-funding for regional or country activities (eg currently planning to allocate funding for peatland conservation and rehabilitation in Central Kalimantan 2005-2009)
- Round table on Sustainable Palm Oil/other private sector contribution (eg Improving sustainability of oil palm/plantations on peat)
- Other governments (Canada, European Union etc)

E. INSTITUTIONAL COORDINATION AND SUPPORT

E.1 Core Commitments and Linkages

One of the most serious problems relating to natural resources in Asia is deforestation and loss of biodiversity. Six countries (China, Indonesia, Malaysia, Myanmar, Philippines and Thailand) account for three-quarters of recent deforestation in the region. Average per capita forest cover for the region was 0.17 ha in 1995, considerably lower than the world average of 0.61 ha. Though there are large variations within the region, the remaining forests seem incapable of satisfying the timber and non-timber needs of the population. In the process of deforestation, two-thirds of wildlife habitats have been destroyed and vast expanses of naturally-fragile land have been exposed to soil erosion.

Natural resource management (NRM) concerns were mainstreamed in IFAD projects since early 1990s. The approach to NRM has evolved from the add-on NRM components to a new generation of project designs, which include a deeper understanding of biophysical and socio-economic inter-linkages. Due to the intrinsic importance of natural resources such as forests to the livelihoods of rural poor communities, IFAD's Strategic Framework and the Regional Strategy for Asia embrace environmental sustainability as a central pillar of project and programme design. These programmes build on the extensive indigenous knowledge of local populations in practicing various forms of forestry and agro-forestry. In addition, IFAD's programmes have realised that conservation measures for biological diversity must benefit the local people to be sustainable.

As examples of how NRM has been mainstreamed, in Indonesia, IFAD has concentrated its financial support in marginal and environmentally degraded areas, with priority given to eastern islands and Kalimantan. IFAD support has been focused on rainfed agricultural development, microfinance, community infrastructure and off-farm, income generating activities and assistance to local grass-roots institutions. IFAD has also been promoting community empowerment through the development of strong self reliant village-level institutions, both formal and traditional. These institutions have been trained to develop the capacities (in terms of organizational, financial and technical knowledge) necessary to enable them to manage natural resources.

This GEF initiative will link with the IFAD's East Kalimantan Local Communities Empowerment Programme, which aims at improving the social and economic well being of approximately 39,000 poor households, mainly living in upland areas. The Programme's objective is to empower such communities to develop and manage village resources in a productive, sustainable and equitable manner through i) Community Empowerment ii) Economic Empowerment iii) Social Services and Rural Infrastructure iv) Security of Tenure over Land and Natural Resources and v) Programme Management Services

In the case of Viet Nam, and due to the Natural forests' decline and the remaining cover being lost annually due to logging, demand for fuel wood, and forest clearing for agricultural purposes GoVN has identified continuing deforestation as 'the most serious threat since reunification' and has responded with increased controls on forest access and use, and major reforestation programs. Currently, IFAD is working with GoVN towards improving allocation and utilisation of land and forest resources in i) addressing issues of landlessness caused by various determinants such as increased indebtedness, vulnerability and inability to compete in market economy that are leading in some Regions to latent tensions or outbreak of conflicts among various members of rural communities, including migrants and ethnic minorities and ii) the development of sustainable forest management models based on allocation (with secured long-term tenure certified in the so-called blue books) of forest land to households and local communities as an important means of increasing the incomes of poor households. This GEF initiative will draw upon IFAD's experience and lessons learned and it will be linked to the ongoing and future initiatives in the country.

E.2 Consultation, Coordination and Collaboration Between and Among Implementing Agencies, Executing Agencies, and the GEF Secretariat, if appropriate

Consultation has taken place with different GEF implementing and executing agencies and related GEF projects during the course of the development of the ASEAN Peatland Management Initiative and ASEAN Peatland Management Strategy. The project proponents are familiar with the ongoing GEF projects and the current proposal builds on earlier GEF interventions in the region as follows:

1. Emergency Response to Combat Forest Fires in Indonesia to Prevent Haze in South East Asia (UNEP-GEF US$750,000 1998-2003)

This grant was provided as a short-term measure under GEF OP3 (Biodiversity) in response the El-Niño induced forest fires in the region in 1997-98. This support focused on coordination of responses to the fires, development of monitoring and early warning systems and generated some important outputs including assistance for development of regional monitoring mechanisms and the regional transboundary haze agreement as well as support for a range of capacity building activities. The project evaluation encouraged future interventions to have more focus on addressing root causes of the fire such as land management issues as well as being more integrated into the ASEAN regional structures. The current project will build on the achievements of the project and draw on the lessons learned.

2. Conservation and Sustainable Use of Tropical Peat Swamp Forest and Associated Wetland Ecosystems in Malaysia (UNDP-GEF $6,300,000 2002-2008)
   The goal of this ongoing project is to ensure the conservation and sustainable use of globally significant biodiversity within Malaysia's Peat Swamp Forest areas through the pursuit of three objectives, namely, demonstration of inter-sectoral planning, application of these plans, and institutional strengthening. The project is focused on conservation of the biodiversity of three important sites in the states of Pahang, Sabah and Sarawak each of which represents a distinct peatland ecosystem. It is envisaged that the project will be complementary to the current project which will focus on broader issues of peatland degradation and rehabilitation in Malaysia and how Malaysian experiences and skills can support other countries in the region. It is envisioned that the project sites and approaches developed with support of the UNDP-GEF project will be promoted as regional demonstration sites and activities in the current project.

3. South East Asia and Indonesia Components of Global project on Integrated Management of Peatlands for Biodiversity and Climate Change (UNEP-GEF $250,000 2003-2006)
   This global targeted research project is being implemented by the Global Environment Centre and the Wetlands International with two of the GEF funded components looking peatland management issues in Indonesia and the South East Asia Region. This project has supported initial work in Indonesia to develop models for community based management and rehabilitation of peatlands which will provide the basis for community based aspects of the current project. At the regional level the UNEP-GEF supported intervention has facilitated the development of the ASEAN Peatland Management Initiative and initiated the development of the ASEAN peatland management strategy – both of which provide an important basis of the current project. The UNEP-GEF project will be completed in Mid-2006 – prior to the initiation of the current project.

E.3 Implementation / Execution Arrangements

The project will be implemented by the ASEAN Secretariat in conjunction with ASEAN member Countries, Global Environment Centre and other partner organisations of the ASEAN Peatland Management Initiative and its associated Strategy. During the project development phase the detailed mechanisms for implementation will be developed. It is likely however that for management purposes, the project will be divided into different components – with some at the regional level being facilitated by ASEAN Secretariat and assisted by GEC and some at the national level being guided by respective governments with the support from established NGOs and other organisations. Some of the envisaged roles of the key partners are as follows:

ASEAN Haze Technical Task Force: The HTTF or other equivalent body established in the framework of the ASEAN peatland management initiative and ASEAN Agreement on Transboundary Haze Pollution will provide policy guidance and oversight of the project implementation.

ASEAN Secretariat: Act as the lead project proponent and director. It will provide overall management and direction of the project and ensure all activities are being carried out within the framework of the ASEAN Peatland Management Initiative and other appropriate ASEAN frameworks. ASEAN Secretariat will see that the project fits into the overall goals and mechanisms of the ASEAN countries and make necessary cross linkage with on-going initiatives whenever appropriate.

National Agencies: National agencies and institutions will take the lead in the direction of national actions in the framework of agreed National Action Plans for sustainable Peatland management. They will be directly involved in developing and implementing appropriate policies and plans related to the regional ASEAN Peatland Management Strategy and will also coordinate activities such as capacity building and training. Another area of involvement will be on the implementation of pilot

or demonstration projects. Country focal points will oversee country related activities through national steering committees.

Global Environment Centre: GEC is a founding collaborative Partner of the APMI and has been assisting the ASEAN Secretariat in its implementation since 2003. It is anticipated that GEC will work closely with the ASEAN Sec to help with the delivery of technical aspects of the project – particularly related to the regional activities and technical guidance of country activities. In the process, GEC will work closely with all national agencies and local organizations and NGOs or individual experts to implement activities proposed. This role of capacity building, training, and on the ground implementation could also be contracted to other local NGOs working on peatlands. GEC shall assist in monitoring of project progress and support the ASEAN Secretariat in the overall reporting and management of the project.

Other Partners: NGOS, centres of excellence and other organisations which are currently active partners in the ASEAN Peatland Management Initiative are expected to play important roles in the implementation of national or demonstration site activities. Similarly private sector associations such as oil palm associations or mechanisms such as the Round Table on Sustainable Palm Oil (RSPO) may be able to play a role in facilitating involvement of the private sector in developing standards for environmentally friendly management.

PART II - PROJECT DEVELOPMENT PREPARATION

A. DESCRIPTION OF PROPOSED PDF ACTIVITIES

A.1 Description of Proposed PDF Activities

The proposed PDF-B represents the will be undertaken over a period of 12 months. Its resources will be used to finance various activities such as consultations and assessments at national and regional levels, and it will include the following activities:

A.1.1 Consensus building and stakeholder participation

A series of national and regional workshops and meetings are included to ensure maximum and adequate consultation and co-ordination among all stakeholders (government agencies, institutions, NGOs, private sector and others). These events are to be organised within the framework of the ASEAN Peatland Management Initiative (APMI) and the process to develop the ASEAN Peatland Management Strategy (see Annex 2) and involve all relevant SE Asian countries. Workshops will be organised to confirm the participation of all stakeholders, building on existing co-ordination mechanisms and collectively review management options for sustainable use of peatland resources among regional and national key stakeholders. These will include: (i) definition of specific responsibilities and timetables for planning and management of peatlands; (ii) formalising mechanisms for ongoing consultation and co-ordination between the key stakeholders and other relevant institutions/ agencies; (iii) enhancing community awareness and understanding of peatland degradation.

A.1.2 Development of ASEAN peatland management strategy and national action plans

The consultations in A1.1 will contribute to the development of the ASEAN Peatland Management Strategy (2006-2020) and associated National Action Plans. These will provide a critical policy and national planning framework for the further development of the project intervention.

A.1.3 Assessment of potential demonstration sites and project pilot areas

Demonstration sites

The project intervention will support the work of ASEAN governments in developing and documenting demonstration sites for best management practices. These sites will generally be those where the governments (with or without assistance of external agencies) have already been able to test or promote some key aspects of sustainable peatland management. A total of 6 candidate demonstration sites have been identified as a result of consultations as part of the APMI. Activities at some of these sites are already being undertaken by the national governments with their own resources or assistance from some members of the international community as highlighted in the list below.

a. Malaysia
- Maludam National Park, Sarawak Peatland protected area management (Sarawak/ Netherlands Government)
- Southeast Pahang Peat Swamp forest, Pahang - Integrated management planning (Pahang government/UNDP-GEF)
- Klias Peninsular Sabah, - Integrated management (Sabah Government/UNDP-GEF)

b. Indonesia
- Berbak Peatlands, Jambi Province Community participation in reserve protection and rehabilitation (Ministry of Forestry/CIDA/ Netherlands Government)

c. Viet Nam (Southern Viet Nam)
- U Minh Thuong National Park (UMTNP), Kien Giang province management plan and fire prevention (Vietnamese Government/SIDA/CARE)

d. Thailand (Southern Thailand)
- Thale Noi Peat Swamp, Phattalung - Ecotourism (Department of National Parks, Wildlife and Plant Protection)

An assessment will be made of these candidate sites (and any others identified by local stakeholders) to determine their suitability as regional demonstration sites for different purposes, as well as the need (if any) for additional resource allocation to support maintenance and upgrading of the demonstration activities.

Pilot areas

A number of pilot sites will be selected to test our different options and modalities for peatland rehabilitation and sustainable use through the project. A total of eight candidate sites have been identified as listed below based on preliminary consultations and assessments in the framework of the ASEAN peatland Management Initiative. Indicative focal issues for pilot activities are given in parentheses. During the PDF process the candidate site list will be developed further, criteria for site selection will be finalised and then a process of site selection will be conducted through field visits and evaluations.

a. Malaysia
- North Selangor Peat Swamp Forest, Selangor (post-fire and drainage rehabilitation)

b. Indonesia

Sumatra:
- Peatlands of western Aceh and West Sumatra (management and rehabilitation of Tsunami impacted peatlands)
- Peatlands of Riau province (balancing peatland protection and sustainable development of oil palm and fibre plantations)
- Merang-kepahayan peatlands South Sumatra province (community-based conservation and sustainable use reserve)

Kalimantan:
- Danau Sentarum peatlands, West Kalimantan (lacustrine peatlands, ecotourism and fishery)
- Peatlands of central Kalimantan (rehabilitation of peatlands impacted by former Mega-rice project area and illegal logging)

c. Viet Nam (Southern Viet Nam)
- Vo Doi Nature Reserve, Camau province (conservation, fire prevention and rehabilitation)

d. Thailand (Southern Thailand)
- Phru To Daeng, Narathiwat (rehabilitation of degraded peatlands and community livelihoods)

A.1.4 Review of financing and extension options and mechanisms to support community-based sustainable agriculture and natural resource management in peatland areas

One of the major barriers to the effective community participation in the unsustainable utilisation of peatlands for agricultural and natural resource purposes is the lack of effective extension and also financing mechanisms to support such actions. Various pilot activities have been started especially in Indonesia to develop and test appropriate models. The review will assess experience and lessons learned and make recommendations on appropriate modalities to be applied during the project implementation.

A.1.5 Documenting best practice for peatland rehabilitation

Over the past five years there have been a number of initial efforts to rehabilitate peatlands in different ASEAN countries. This element of the work will contribute to the process under the APMI of collating experiences and best management practices related to peatland rehabilitation – which can then guide the design and costing of specific interventions to be supported under this regional intervention.

A.1.6 Review regional and country institutional frameworks

The review of regional and country frameworks will assess the overall institutional frameworks for peatland management at the regional (ASEAN) and focal country level. In addition it will look at the specific institutional anchoring of the project and the options and requirements for the project to support institutional strengthening of relevant agencies at regional, national and local level in both the governmental and civil society. This review will also assess mechanisms for greater engagement and partnership with the private sector.

A.1.7 Development of a monitoring and evaluation system

A monitoring and evaluation system for the intervention will be developed as part of the project design to include the setting of targets and specific indicators. It is envisaged that the M&E system will draw on the existing monitoring mechanisms established by the ASEAN countries to monitor land and forest fires in the region as well as other mechanisms to assess the status of peatlands in the region. The monitoring system will involve different stakeholders in its design and execution and will track physical, institutional and capacity related changes as a result of the intervention.

A.1.8 Develop the full project proposal

The full GEF proposal will be developed based on the other outputs of the PDF-B process to meet the GEF requirements. The design will be undertaken in a consultative manner with active involvement of a broad range of stakeholders, guided by a project preparation team familiar with both GEF project design requirements as well as having the appropriate institutional and technical expertise. Part of the proposal preparation process will be the development of the finance plan with country representatives, local stakeholders and international donor community.

Implementation of the Project Development Phase

It is envisaged that the project development process will be guided by IFAD and implemented by the ASEAN Secretariat in conjunction with the Global Environment Centre.

B. PDF BLOCK B OUTPUTS

Implementation of the proposed project PDF-B activities will produce the GEF full project brief, including the identification and quantification of global environmental benefits and incremental costs analysis. Other expected outputs are:

- Negotiated plan of action among the major partners on roles, responsibilities, and actions to be implemented during the project, including schedules and budgets.
- Interim support for the development of the ASEAN Peatland Management Strategy and National Action plans.
- Report on review of finance options and mechanisms to support community-based sustainable agriculture and natural resource management in peatland areas
- Compilation of best practices for peatland rehabilitation
- Options for innovative finance mechanisms

C. JUSTIFICATION

The GEF funding is required to help secure global environmental benefits in the context of the sustainable peatland management for livelihood. This project is required to ensure that the peatland ecosystems in the region, which play key roles in water storage, flood control, producing non-timber forest products for local communities, as well as providing global benefits for carbon storage and preservation of biodiversity are preserved. It is also required to develop a comprehensive, integrated socio-economic and environmental model for control of peatland degradation and poverty alleviation of peatland dependant communities that can be replicated in other countries and regions. Without GEF involvement, the peatlands in the region will continue to be unsustainably used and be degraded through drainage and fire causing loss of natural functions as well as major social, health, economic and environmental impacts in the region.

A PDF-B grant is required to fund the preparatory activities for development of the full project proposal, including specific focused studies on institutional financing and extension mechanisms to guide the project design. In addition support will be provided to the ongoing ASEAN process to develop an ASEAN Peatland Management Strategy including National Action Plans. The work will be done under the guidance of the ASEAN Secretariat in the framework of the ASEAN Peatland Management Initiative.

The PDF-B funding will be used to develop a full project proposal demonstrating how enhanced capacity building, rehabilitation and restoration of degraded peatlands coupled with innovative approaches for alternative livelihood options will result in poverty alleviation and improved local

livelihoods, while at the same time providing local and global environmental benefits in reducing fire and associated haze and protection of biodiversity. The project will be create a "win – win" situation for local governments, private sector as well as the local peatland-dependant communities.

D. TIMETABLE

May 2005 – June 2006

No	PDF Block B Activity	J	J	A	S	O	N	D	J	F	M	A	M	J	J
1	Consensus building and stakeholder participation	x	x	x	x	x	x								
2	APMS and NAPs	x	x		x	x	x	x	x	x	x				
3	Assessment of potential target areas for rehab/mgt			x	x	x	x	x							
4	Review of finance options and mechanisms				x	x	x	x	x						
5	Documenting best practice for peatland rehabilitation				x	x	x	x	x						
6	Multi-country and National institutional assessment			x	x	x	x	x							
7	Monitoring and evaluation system								x	x					
8	Develop the full project proposal								x	x	x	x	x	x	
9	Submission to GEF Council														x

Note: The preparation activities are proposed to start on 24-26 May 2005 when senior officials from the ASEAN Countries as well as peatland experts and international organisation representatives will meet in Kuala Lumpur to discuss and refine the ASEAN Peatland Management Strategy as well as review the process to develop the proposal to GEF.

E. BUDGET - PREPARATORY PHASE: PDF-B

The total budget proposed for the PDF Block B phase activities is USD 520,000 with a GEF contribution of USD$340,000 and co-funding of $180,000.

No	PDF Block B Activity	GEF	Co-funding IFAD	Co-funding GEC/ASEAN SEC/WI In Kind/ Financial	Co-funding In Kind by Countries	Total USD
1	Multi-country, National and local stakeholder meetings and Consensus building	60,000	10,000	10,000	20,000	100,000
2	ASEAN Peatland Management Strategy and National Action plans	50,000		20,000	20,000	90,000
3	Assessment of potential target areas for rehab/mgt	40,000	5,000	5,000	5,000	55,000
4	Review of finance options and mechanisms	15,000	10,000		5,000	30,000
5	Documenting best practice for peatland rehabilitation	30,000		20,000		50,000
6	Review multi-country and national institutional frameworks	35,000		10,000	10,000	55,000
7	Development of a monitoring and evaluation system	20,000	5,000			25,000
8	Develop the full project proposal	90,000	20,000	10,000	15,000	135,000
	Total USD	**340,000**	**50,000**	**75,000**	**75,000**	**540,000**

Annex 1 Extracts from the ASEAN Agreement on Transboundary Haze Pollution

The ASEAN Agreement on Transboundary Haze Pollution entered into force on 25 November 2003, following the deposit of the sixth instrument of ratification by the Government of the Kingdom of Thailand. Brunei Darussalam, Malaysia, Myanmar, Singapore, and Viet Nam had earlier deposited their instrument of ratification/approval.

The Preparatory Meeting for the First Meeting of the Conference of the Parties (COP) to the ASEAN Agreement on Transboundary Haze Pollution was held on 28-30 April 2004 in Kuala Lumpur, Malaysia. The First Meeting of the COP was held in Vietnam in November 2004.

Key extracts of the Agreement are:

RECOGNISING the need to study the root causes and the implications of the transboundary haze pollution and the need to seek solutions for the problems identified

AFFIRMING their willingness to further strengthen international co-operation to develop national policies for preventing and monitoring

DESIRING to undertake individual and joint action to assess the origin, causes, nature and extent of land and/or forest fires and the resulting haze, to prevent and control the sources of such land and/or forest fires and the resulting haze by applying environmentally sound policies, practices and technologies and to strengthen national and regional capabilities and co-operation in assessment, prevention, mitigation and management of land and/or forest fires and the resulting haze

PART 1: GENERAL PROVISION

Article 1: Use of Terms
7. "Land and/or forest fire" means fires such as coal seam fires, peat fires and plantation fires"

Article 2: Objective
To prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated through concerted national efforts and intensified regional and international co-operation

PART 2: MONITORING, ASSESSMENT, PREVENTION AND RESPONSE

Article 9: Prevention
b. develop appropriate policies to curb activities that may lead to land and/or forest fires
d. strengthening local fire management and firefighting capability and…
e. promoting public education and awareness building campaigns and strengthening community participation in fire management to prevent land and/or forest fires…

Article 16: Technical Cooperation
d. provide or make arrangements for relevant training education and awareness raising campaigns, ….

Article 17: Scientific Research
The Parties shall individually or jointly, including in co-operation with appropriate international organisations, promote and, whenever possible, support scientific and technical research programmes related to the root causes and consequences of transboundary haze pollution and the means, methods, techniques and equipment for land and/or forest fire management, including fire fighting.

Article 20: Financial Arrangements
1. A Fund is hereby established for the implementation of this Agreement.
2. It shall be known as the ASEAN Transboundary Haze Pollution Control Fund.
3. The Parties shall, in accordance with the decisions of the Conference of the Parties, make voluntary contributions to the Fund.
4. The Fund shall be open to contributions from other sources subject to the agreement of or approval by the Parties.
5. The Parties may, where necessary, mobilise additional resources required for the implementation of this Agreement from relevant international organisations, in particular regional financial institutions and the international donor community.

Annex 2 Extract from ASEAN Peatland Management Initiative and Draft ASEAN Peatland Management Strategy

A. ASEAN Peatland Management Initiative - APMI

The concept for this initiative was developed through discussion with a broad range of agencies in 1999-2001. A draft was presented at the 13th ASEAN Senior Officials for Environment Haze Technical Task Force (HTTF) Meeting and the 7th ASEAN Ministerial Meeting on Haze (AMMH) on July 5 and 6, 1999. The AMMH on June 11, 2002 in Kuala Lumpur decided to focus on peatland management and fire, and the associated haze. On June 10, 2002 at the same place, a new regional treaty (the ASEAN Agreement on Transboundary Haze) was signed by all ASEAN countries to act as a framework for cooperation in addressing problems of forest and peat fires.

The 19th ASOEN Haze Technical Task Force (HTTF) and the 9th ASEAN Ministerial Meeting on Haze (AMMH) on 10/11 June 2002 discussed the issue of fire prevention and control in peatlands. The AMMH decided to develop further the concept for a regional initiative on peatland management and fire prevention, and requested the Chair of the HTTF to develop this initiative with the ASEAN Secretariat and Global Environment Centre. The APMI was discussed and developed further through consultations, questionnaires and regional meetings and was approved on Feb 28, 2003 at the HTTF Meeting in Manila, Philippines, together with a workplan for 2003-2005 In February 2003 at Seam Reap, Cambodia, the AMMH highlighted the approved Initiative.

i. Goal and objectives

The goals of the APMI is to promote sustainable management of peatlands in the ASEAN region through collective actions and enhanced cooperation to support and sustain local livelihoods, reduce risk of fire and associated regional haze and contribute to global environmental management.

The objectives are:

- To enhance understanding and build capacity on peatlands management issues in the region
- To reduce the incidence of peatland fires and associated haze
- To support national and local level implementation activities on peatland management and fire prevention
- To develop a regional strategy and cooperation mechanisms to promote sustainable peatland management

ii. Key issues

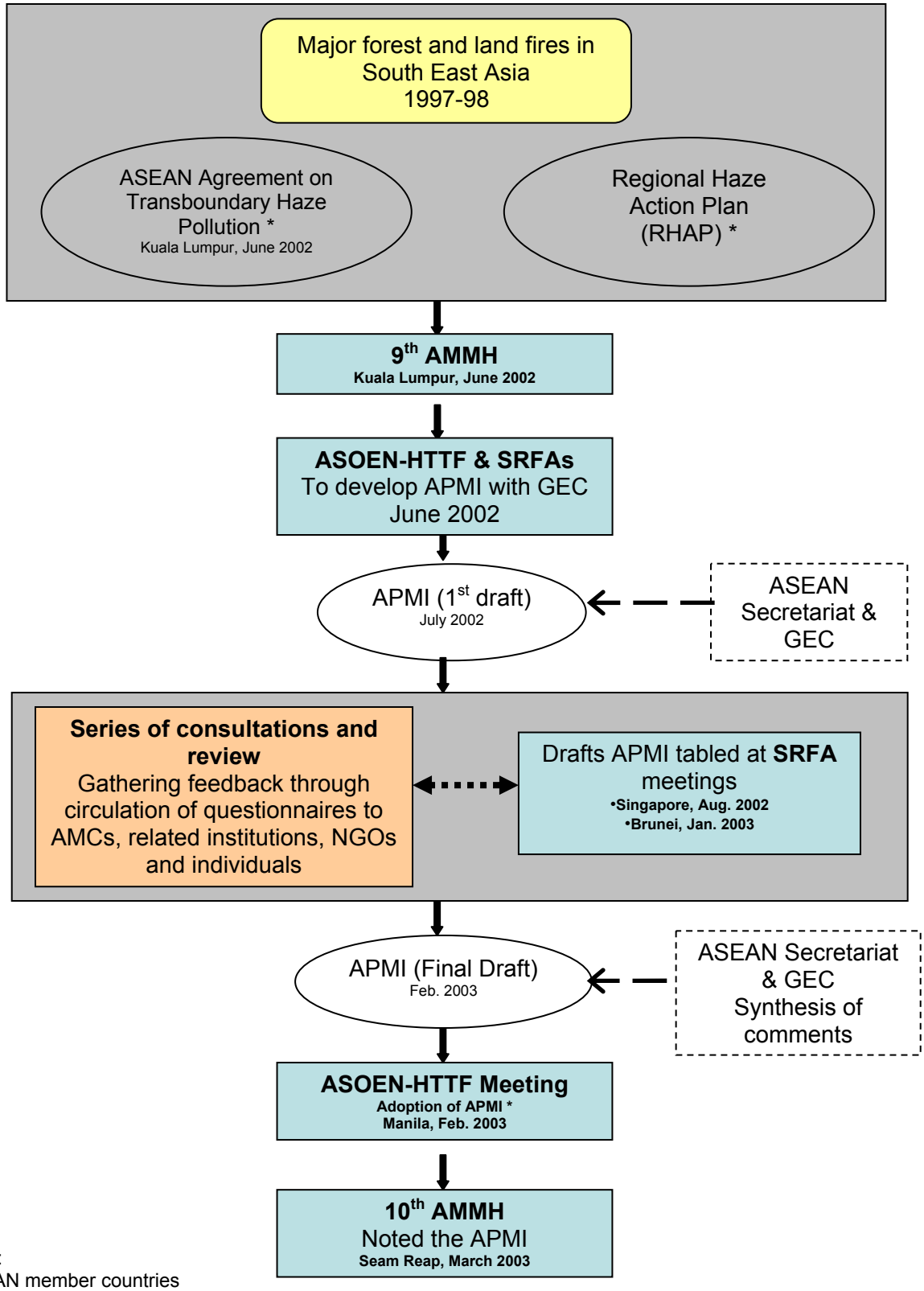
A "Needs and Contributions Assessment" was conducted through a questionnaire circulated by the ASEAN secretariat to country focal points, other agencies and experts. Responses were received from six ASEAN focal points and a range of other agencies and experts. The ranking of key issues affecting peatlands were3 as follows:

1.	Fire	(81%)
2.	Loss of Biodiversity	(81%)
3.	Drainage/ water management	(71%)
4.	Over logging	(48%)
5.	Difficulty in reforestation	(48%)
6.	Lack of inter-agency coordination	(48%)

The initiative aims to develop a framework that would include an action plan looking into areas of concern in an integrated manner which could address the following issues:

- Capacity building
- Conservation of biological diversity and protection of key sites
- Impacts of inappropriate land development
- Prevention of peat swamp forests fires
- Rehabilitation of peat swamp Forests
- Ecological restoration of peatland
- Sustainable forest management
- Socio-economic uses of peatland
- Role of peatland in water resources management
- Protection of carbon stores and carbon sequestration functions.

DEVELOPMENT OF THE ASEAN PEATLAND MANAGEMENT INITIATIVE (APMI)



Abbreviations:
AMCs – ASEAN member countries
AMMH – ASEAN Ministerial Meeting on Haze
ASOEN-HTTF – ASEAN Senior Officials on Environment - Haze Technical Task Force
GEC – Global Environment Centre
SEA – South East Asia
SRFAs – Sub-Regional Firefighting Arrangements

B. ASEAN Peatland Management Strategy - APMS

The goal of the Strategy is to promote sustainable management of peatlands in the ASEAN region through collective actions and enhanced cooperation to support and sustain local livelihoods, reduce risk of fire and associated haze and contribute to global environmental management. It is in line with the ASEAN Vision 2020 to have *"…a clean and green ASEAN with fully established mechanisms for sustainable development to ensure the protection of the region's environment, the sustainability of its natural resources, and the high quality of life of its peoples…".*

The Regional Strategy will provide a common framework for all those with responsibilities for, or commitments to, the sustainable management of peatlands, on its wise use, prevention and fires and rehabilitation. It builds on the principles for regional cooperation embodied in the Declaration of ASEAN Concord II (Bali Concord II)., It will also contribute to the development of the ASEAN Socio-cultural Community (ASCC) which is intended to intensify cooperation in addressing regional problems including those associated with environmental degradation and transboundary pollution.. Besides, this Strategy will also be a contribution to the implementation of the ASEAN Agreement on Transboundary Haze Pollution and the ASEAN Regional Haze Action Plan.

There are four General Objectives to the proposed ASEAN Peatland Management Strategy. The General Objectives are as follow:

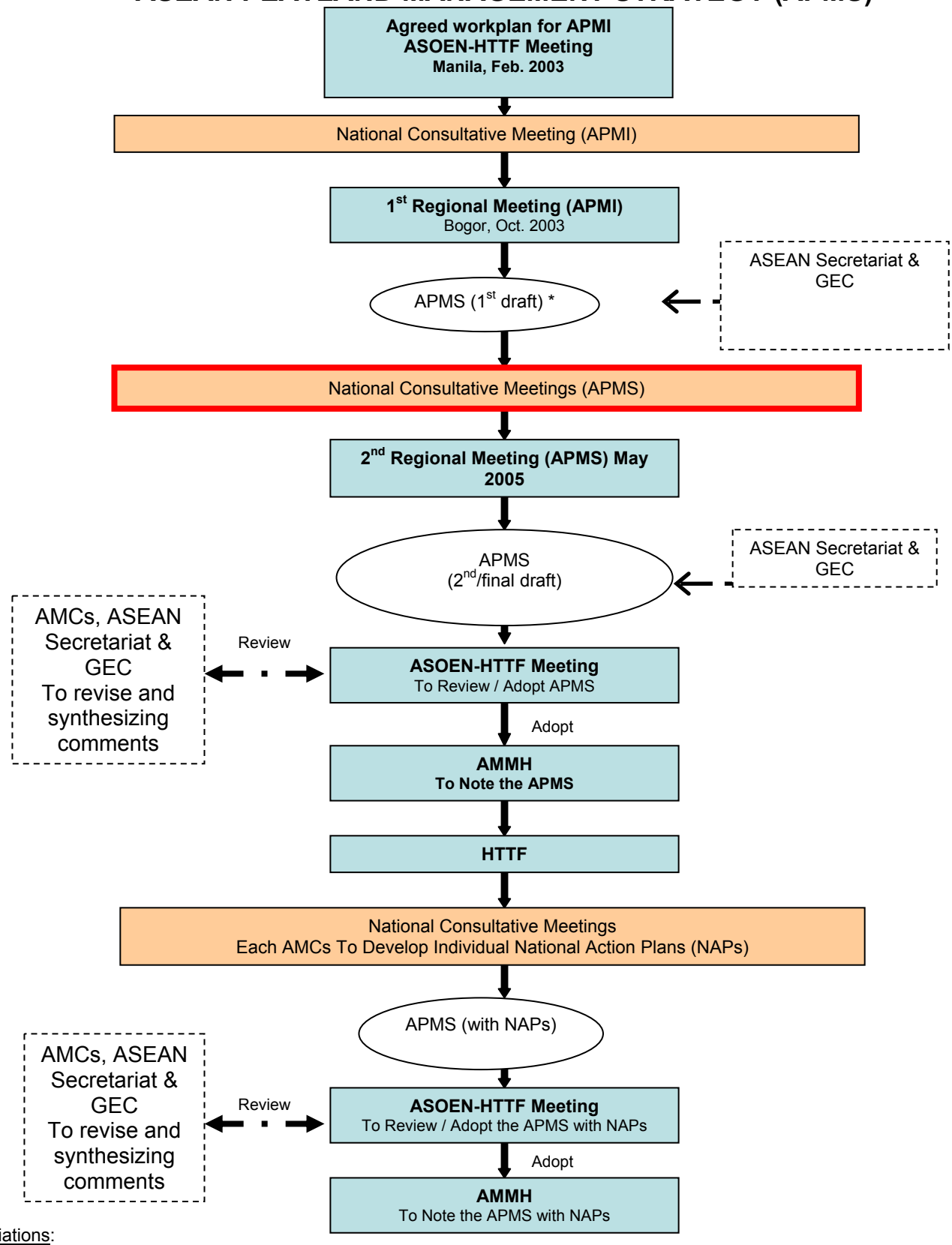
General Objective 1.	Enhance Awareness and Capacity on Peatlands: To stimulate awareness and understanding on peatland issues and build capacity on wise use and sustainable management of peatlands in the region
General Objective 2.	Address Transboundary Haze Pollution and Environmental Degradation: To reduce the incidence of peatland fires and associated haze in the region, and to enhance prevention, control and monitoring through collective efforts among the AMC
General Objective 3.	Promote Sustainable Management of Peatlands: To promote integrated management of peatlands for forestry, water, agriculture, local community livelihood, and rehabilitation of degraded peat swamps forest or peatlands
General Objective 4.	Promote Regional Cooperation: To promote and enhance regional cooperation through information exchange and sharing, research and partnership in implementation of activities as well as in generating resources

Each General Objective above is to be delivered by the Operational Objectives and Actions. Each Action under the Operational Objective contributes to the delivery of one or more of the General Objectives [GO] of this Strategy.

The Operational Objectives cover the following areas of activity:

1. Inventory and assessment
2. Capacity building and awareness
3. Information sharing
4. Policies and legislation
5. Fire prevention, control and monitoring
6. Conservation of peatland biodiversity
7. Integrated management of peatlands
8. Establishment of best managed peatland demonstration sites
9. Restoration and rehabilitation
10. Regional cooperation
11. Financing of the Initiative

DEVELOPMENT OF THE ASEAN PEATLAND MANAGEMENT STRATEGY (APMS)



Abbreviations:
AMCs – ASEAN member countries
AMMH – ASEAN Ministerial Meeting on Haze
ASOEN-HTTF – ASEAN Senior Officials on Environment - Haze Technical Task Force
GEC – Global Environment Centre
SRFAs – Sub-Regional Firefighting Arrangements

Annex 3 The Declaration of ASEAN Concord II (Bali Concord II)/ASEAN Vision 2020

Declaration of ASEAN Concord II (Bali Concord II)

During the 9th ASEAN Summit in October 2003, the ASEAN Leaders pledged to achieve an ASEAN Community by the year 2020 that will rest on the three pillars of "ASEAN Security Community", "ASEAN Economic Community" and "ASEAN Socio-cultural Community" as embodied in the Declaration of ASEAN Concord II (Bali Concord II). The ASEAN Socio-cultural Community (ASCC) was envisaged in consonance with the goal set by ASEAN Vision 2020, in which ASEAN will be bonded together in partnership as a community of caring societies. Through the ASCC, cooperation in social and rural population will be strengthened, and active involvement of all sectors of society, including women, youth and community groups, will be sought. The ASCC will also intensify cooperation in addressing problems associated with population growth, education, unemployment, prevention of infectious diseases such as HIV/AIDS and SARS, environmental degradation and transboundary pollution.

ASEAN Vision 2020

ASEAN cooperation on the environment has been guided by the ASEAN Vision 2020, the medium-term plans of action, and meetings of the ASEAN Ministers on Environment. ASEAN Vision 2020 specifically calls for "…a clean and green ASEAN with fully established mechanisms for sustainable development to ensure the protection of the region's environment, the sustainability of its natural resources, and the high quality of life of its peoples