GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Sustainable Management of Peatland Ecosystems in Malaysia (SMPEM)		
Country(ies):	Malaysia	GEF Project ID:[1]	9270
GEF Agency(ies):	IFAD (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):	Ministry of Natural Resources and Environment, ASEAN Secretariat, Global Environment Centre	Submission Date: Re-submission date: 2nd resubmission date: 3rd resubmission date:	2015-07-31 2015-08-21 2016-02-02 2016-04-04
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:		Agency Fee ($)	848,973

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES[2]

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Trust Fund**	**(In $)**	
		GEF Project Financing	**Co-financing**
BD-1 Program 1	GEFTF	800,000	7,000,000
BD-4 Program 9 (select) (select)	GEFTF	1,535,797	8,902,167
(select) CCM-2 Program 4 (select)	GEFTF	3,773,211	18,600,013
LD-3 Program 4 (select) (select)	GEFTF	179,677	3,000,000
(select) (select) SFM-2 Program 5	GEFTF	3,144,342	10,347,820
Total Project Cost		9,433,027	47,850,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To strengthen national policy and institutional capacity for implementing peatland related strategies and plans and to enhance integrated sustainable peatland management in targeted landscapes

Project Components	**Financing Type[3]**	**Project Outcomes**	**Project Outputs**	**Trust Fund**	**(in $)**	
					GEF Project Financing	**Co-financing**
1. Enhanced policies and improved institutional capacity and arrangement for planning and implementation of peatland related strategies and plans	TA	Enhanced resources, multistakeholder involvement and capacity for implementing the National Action Plan on Peatlands (2011-2020) and for developing peatland-related plans/strategies	Output 1.1. Policies and institutional arrangements and capacity enhanced Output 1.2. Multi-stakeholder partnerships, resource availability and innovative incentives for peatland management improved Output 1.3. Knowledge management and exchange enhanced to support scaling-up of sustainable peatland forest management	GEFTF	2,685,644	9,430,635

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.
[3] Financing type can be either investment or technical assistance.

2. Reduction of peatland degradation, and GHG emissions in Selangor, Sabah, Sarawak and Pahang	INV	Significant reduction in peatland fires and associated haze, and GHG emissions in 1.5 million ha of peatlands in Selangor, Sabah, Sarawak and Pahang	Output 2.1 State Action Plan on Peatland (SAPP) and Strategy for Peatland Fire Prevention and Control developed and implemented in Selangor, Sabah, Sarawak, Johor and Pahang States and measures for cooperative fire prevention improved Output 2.2 Fire risk and GHG emissions reduced in plantations and agriculture on peat through utilization of best management practices	GEFTF	1,980,563	17,714,298
3. Development and implementation of Integrated Management Plans (IMP) for targeted, important biodiversity sites	INV/ TA	Integrated Peatland Management Plans (IMP) effectively implemented reducing fires, enhancing forest rehabilitation and water management and improving livelihood of local communities in 290,000 ha of critical peatland ecosystems	Output 3.1 Enhanced implementation of Integrated Management Plans (IMP) for North Selangor Peat Swamp Forest and Southeast Pahang Peat Swamp Forest Output 3.2 Review and update of IMP for Klias Forest Reserve and Loagan Bunut National Park as well as development of new IMP for Maludam National Park and South Selangor Peat Swamp Forest,	GEFTF	4,317,628	18,426,496
				Subtotal		8,983,835	45,571,429
				Project Management Cost (PMC)[4]	GEFTF	449,192	2,278,571
				Total Project Cost		9,433,027	47,850,000

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
GEF Agency	IFAD	In-kind	750,000
Recipient Government	Malaysia	In-kind	35,000,000
Donor Agency	EU and German Government	Grants	5,050,000
CSO	GEC and others	In kind	1,000,000
Intergovernmental agency	ASEAN Secretariat	In-kind	50,000
Private Sector	Agriculture, plantation and housing development sector	In-kind	6,000,000
Total Co-financing			47,850,000

[4] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS [a)]

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)[b)]	Total (c)=a+b
IFAD	GEFTF	Malaysia	Biodiversity	(select as applicable)	2,335,797	210,222	2,546,019
IFAD	GEFTF	Malaysia	Climate Change	(select as applicable)	3,773,211	339,589	4,112,800
IFAD	GEFTF	Malaysia	Land Degradation	(select as applicable)	179,677	16,170	195,847
IFAD	GEFTF	Malaysia	Multifocal	SFM	3,144,342	282,992	3,427,334
Total GEF Resources					9,433,027	848,973	10,282,000

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT PREPARATION GRANT (PPG)[5]

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: $200,000				PPG Agency Fee: 18,000			
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in $)		
					PPG (a)	Agency Fee[6] (b)	Total c = a + b
IFAD	GEF TF	Malaysia	Biodiversity	(select as applicable)	49,524	4,457	53,981
IFAD	GEF TF	Malaysia	Climate Change	(select as applicable)	80,000	7,200	87,200
IFAD	GEF TF	Malaysia	Land Degradation		3,810	343	4,153
IFAD	GEF TF	Malaysia	Multi-focal Areas	SFM	66,666	6,000	72,666
Total PPG Amount					**200,000**	**18,000**	**218,000**

[5] PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to $50k for PF up to$2m (for MSP); up to $100k for PF up to $3m; $150k for PF up to $6m; $200k for PF up to $10m; and $300k for PF above $10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

[6] PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[7]

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	*1,500,000 hectares*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*300,000 hectares*
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	*Number of freshwater basins*
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	*Percent of fisheries, by volume*
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO_{2e} mitigated (include both direct and indirect)	*3,064,000 metric tons*
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	*metric tons*
	Reduction of 1000 tons of Mercury	*metric tons*
	Phase-out of 303.44 tons of ODP (HCFC)	*ODP tons*
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	*Number of Countries:*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*Number of Countries:*

PART II: PROJECT JUSTIFICATION

1. *PROJECT DESCRIPTION*

1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed:

Peatlands are a fragile and unique ecosystem with important ecological functions and values. In addition to acting as repositories for biodiversity, peatlands in Southeast Asia is of global importance because of its ability to store an estimated 120 billion tonnes of carbon or approximately 5% of the world's terrestrial carbon. The peatlands found in Malaysia significantly contribute to the global carbon store in this region. Peatlands also play a critical role in the socio-economic wellbeing of the country, particularly for their ecological and hydrological values, timber and non-timber forest products, water supply, flood control and many other social, environmental and economic benefits.

In Malaysia, peatlands are the most widespread type of wetlands occurring in more than six (Selangor, Johor, Perak, Pahang, Sabah and Sarawak) of the 13 states and covering an area of about 2.6 million ha (approximately 8% of the total land area). The largest area of peat is found in Sarawak, which is more than 1.5 million ha. Approximately 30% of the total peatland area in Malaysia is found in forest reserves. The remaining areas have been converted for other uses while some are still designated as state forest lands. Peatlands are recognized as environmentally sensitive areas (ESA) under Section 6B of the Town and Country Planning 1976 (Act 172) in the National Physical Plan (NPP). The

[7] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

uses and values of peatlands in Malaysia can be categorized into those that pertain to socio-economics (e.g. forestry, agriculture, infrastructure, community livelihood, etc.) and those that pertain to protective or conservation purposes (e.g. forest, flood mitigation, water supply and as carbon stores).

Increasing pressures for land development (e.g. agriculture, infrastructure) however has affected peatlands in Malaysia over the past 20 years. A number of these threats directly stem from, or are associated with, land conversion for primarily agricultural purposes. The unsustainable management of these agricultural lands has caused serious problems. In the last two decades, more than 1 million ha of peatlands in Malaysia have been converted for agricultural purposes, yet many agricultural and plantation projects for oil palm, rice and various other crops on peatlands have failed due to unsuitable conditions and the application of inappropriate methods. These land conversions have direct, negative physical impacts on the integrity of peat ecosystems (e.g. peat subsidence, fire and loss of vital ecological services), ecological support services (e.g. flood mitigation, prevention of saline water intrusion, sediment and toxic removal, groundwater recharge, micro-climate regulation), and associated biodiversity.

While the management of peatland areas in Malaysia comes under the jurisdiction of the State Government where the peatland is found, the following barriers are often faced against sustainable peatland management:

a) *Inadequate Policies and Weak Institutional Framework* - Currently, there is a lack of specific policies and guidelines related to sustainable peatland management in Malaysia. Existing policies and guidelines do not provide proper peatland management guideline, which further contributes to the unsustainable use and degradation of peatlands and their resources.

b) *Inadequate Information on Peatland Management* - There is currently inadequate information on sustainable peatland management due to a poor understanding of peatland ecosystems. It is also difficult to access existing information from the respective government agencies, departments and ministries which relate to peatlands and their resources.

c) *Historical legacy of unsustainable agricultural production or timber harvesting in peatlands* - Peat soils are generally marginal to poor for agriculture, particularly those exceeding 2 m in depth. Poor or unsustainable practices and the abandonment of agricultural projects leave the degraded peatlands vulnerable and susceptible to more negative impacts and threats, leading to further peatland degradation. The uncontrolled rate of timber-harvesting constitutes a major threat to peatlands, especially when tracked excavators were introduced for the canal extraction system (i.e. large canals were constructed to drain water from peat swamp forests to facilitate easier access for heavy vehicles and for the extraction of timber). This system induces over-drainage and lowers the natural high water table when the area is abandoned. This results in subsidence, soil compaction, drying out and fire susceptibility. While this system has now been replaced in some sites with a more environment-friendly system (the railway or kuda-kuda system), the effects from the previous system are continuing to negatively affect the existing peatlands.

d) *Over-drainage from Forestry and Agricultural Practices* - One of the prominent characteristics of peatlands is its high water table. This naturally-occurring high water table is an important factor in their formation and for sustaining their stability. Over-drainage of peatlands can have detrimental effects to the ecosystem. The threats of over-drainage stem from forestry and agricultural practices in peatlands. Agricultural and forestry practices generally attribute to poor water management practices in peatlands, which significantly lower the water table leading to the drying and breakdown of peat soils (i.e. peat subsidence). This in turn affects the floral and faunal biodiversity. In severe cases of over-drainage, subsidence of up to 5 m have been recorded over a period of 20 years and such negative impacts could also be further enhanced during the dry season or droughts.

e) *Peatland Fires and Associated Haze Pollution* - Peatland fires in the Malaysia and in the Southeast Asian region as a whole have been a common phenomenon over the past 20 years. They are often associated with periodic drought occurrences and closely-linked with forest clearance and drainage activities by the forestry and agricultural sectors. The El Niño Southern Oscillation (ENSO) cycles also play a significant role

in peatland fire incidents. Detrimental impacts associated with peatland fire incidences are the negative effects on the socio-economy of local communities who are dependent on peatland resources, environmental pollution and the significant decrease or loss of important floral and faunal populations. Peatland fires are a major source of GHGs with annual emissions estimated at 48 million tonnes CO_{2eq} from Malaysia. The corollary impacts of climate change are further increasing the incidences and intensity of peatland fires in Malaysia. The incidence of peatland fires in Malaysia have been significantly increasing in recent years with the cumulative hotspot count for peninsular Malaysia in 2014 exceeding all other years on record.

2) Baseline scenario or any associated baseline projects:

After El Niño Episode in 1997/98 and subsequent regular droughts and fire events during 2000 – 2014, the Malaysian Government has recognized the negative environmental impacts of converting peatland forests to other land uses. Ten Ministers of Environment from ASEAN Member States (AMS), including Malaysia, adopted the ASEAN Peatland Management Strategy (APMS, 2006-2020) in 2006, which spurred Malaysia to develop a National Action Plan for Peatlands (NAPP) in 2007. It was finalized during the implementation of GEF/IFAD ASEAN Peatland Forests Project (APFP) 2009 - 2014. The NAPP was adopted by the Malaysian Cabinet in May 2011 and is being implemented over the period 2011-2020. The progress of implementation of the NAPP is being monitored by the Ministry of Natural Resources and Environment through the reporting to the National Peatland Project Steering Committee. The NAPP is a 10-year planning document which went through a review in 2014.

There have been a number of completed and on-going activities/projects related to peatlands in Malaysia including the following: i) Sustainable Management of Peat Swamp Forests with special reference to Ramin, 2001-2004, ii) Development and Management of Maludam National Park, 2001-2004, iii) Conservation and Sustainable Use of Tropical Peat Swamp Forest and Associated Wetland Ecosystems, 2002-2007, iv) Development of Restoration Technique for Secondary Peat Swamp Forest in North Selangor, 2002-2005, v) Optimum Harvesting Regimes for Peat Swamp Forests in Peninsular Malaysia, 2004-2007, vi) ASEAN Peatland Forests Project - Malaysia Component, and vii) Sustainable Management of Peatland Forests in Southeast Asia (SEApeat) Project. These projects were targeted at state and local levels, focusing mostly on sustainable use and rehabilitation of peat swamp forests. Multi-stakeholder, integrated and participatory approaches involving government departments, private sector, local community and NGOs/CBOs were adopted to address the main issues pertaining to peatland management.

Some of the key actions undertaken through the APFP and SEApeat project include: development of the NAPs which was completed and adopted by the Malaysian Cabinet in May 2011, with execution being delegated to relevant agencies.. To increase institutional capacity and strength in peatland and fire management issues, capacity-building training sessions were conducted. In terms of awareness-raising, several types of materials were produced through the project in both English and Malay, with support from corporate social responsibility partners. The Virtual Peatland Education Centre (outdoor classroom) was established at Raja Musa Forest Reserve (RMFR).

The project facilitated the generation of geographic spatial information map for peatland areas in the country, which subsequently contributed to the documentation on the status and trends in peatlands in Southeast Asia. Through the project, the fire risk map was made available for the NSPSF while the Department of Environment produced a fire-prone map for Malaysia with the support from MMD, which also hosts the forest fire information system developed by the Malaysian Remote Sensing Agency to provide information/ updates on fire- and/or haze-related situations in the country. Standard Operating Procedures for fire prevention formulated by the Department of Environment's programme in peatland areas are available and adopted by local authorities. A fire danger rating system (FDRS) was developed and successfully implemented at the pilot sites and subsequently expanded throughout Malaysia. Ground-trothing by the Department of Environment and other government agencies is now based on FDRS maps. Guidelines on best management practices for agriculture on peat were developed by the Malaysian Agriculture Research and Development Institute. At the pilot site (North Selangor Peat Swamp Forest), the activity involved educating local communities on the importance of maintaining high water table and of zero burning during planting. The MMD has facilitated real-time monitoring for the pilot site by installing an automated weather station in the nearby Ladang Tennamaram. Drainage control measures were established at the pilot site as well as in other fire-prone peatland

areas throughout Malaysia such as in Pekan (Pahang), Miri (Sarawak) and at the Kuala Langat South Peat Swamp Forest (KLSPSF) (Selangor) using cofunding.

Rehabilitation activities were undertaken at degraded peat areas in the RMFR and a manual on peat swamp rehabilitation in Malaysia was published by Forest Research Institute Malaysia. The integrated management plan for the NSPSF expired in 2010 and a major revision and expansion was conducted in 2013-4. A scientific expedition was conducted to the NSPSF by the Malaysian Nature Society in order to supplement the needed biodiversity and environmental data to the review of Integrated Management Plan for NSPSF 2014-2023.

Private-sector support for buffer zone management in Selangor was initiated through fire prevention and suppression activities, including canal blocking. Implementation of a strategy for buffer zone management with the private sector was initiated in 2012. Fire prevention and suppression activities were carried out with the neighbouring developers through canal blocking and construction of a clay bund to prevent drainage of water from the RMFR. Community livelihood and peatland management activities were initiated at the RMFR. Guidelines for community participation were developed and a community-based organization called Sahabat Hutan Gambut ("Friends of Peatland Forests") was established in August 2012. A seedling buy-back system was introduced to support ongoing forest rehabilitation programme.

Another private sector supported programme was launched in 2008 by the Malaysia Airlines, "Towards a Greener Future", a voluntary carbon offset programme (VCOS) that allows passengers to pledge a contribution towards reducing the CO2 effects. The programme is being managed by Forest Research Institute of Malaysia through a trust fund account/mechanism to support selected UN-sanctioned forest conservation projects in Malaysia.

In the absence of the GEF6 intervention, it is expected that the government of Malaysia will support specific activities through different sector ministries and departments. Department of Environment (DOE) will allocate resources for the management of peatland forest mainly on fire prevention and control. The State Forestry Departments will focus on management of forest reserves and not on broader peatland landscapes. The Department of Agriculture (DOA) will focus on enhancing food production. Malaysian Meteorological Department (MMD) will maintain its weather forecasting services.

Barriers to the implementation of the NAPP are primarily due to limited allocation of national budget for peatland management as well as unclear prioritization of the peatland issues in the respective institutions. Based on past experience activities under different agencies will be implemented in an independent manner with limited coordination and synergy building. A significant portion of the allocated national resources will focus on monitoring and controlling peatland fires, and providing support and services to those communities negatively impacted by the fires and haze. As such, resources will be less available for: translating national laws into state and local level action plans; clarifying jurisdictional responsibilities for fire prevention and management; building multi-stakeholder coordination mechanisms at different levels; engaging small and mid-level oil palm planters; articulating approaches for scaling out the Fire Danger Rating System (FDRS) nationally; mapping hydrological units and hotspots; rehabilitating degraded peatland forests or abandoned oil palm plantations or agricultural land established on peatlands; engaging a broader group of peatland research institutions; and maintaining political and community interest in haze management.

3) Proposed alternative scenario, with a brief description of expected outcomes and components of the project:

Goal: To support Malaysia to contribute to achieving the following six targets of the ASEAN Programme on Sustainable Management of Peatland Ecosystems 2014-2020 (APSMPE):

(1) All peatland areas in ASEAN identified and inventoried;
(2) Zero-burning uniformly practiced to prevent any uncontrolled wildfires on peatland, in order to eliminate any widespread smoke haze;
(3) Fire-prone sites rehabilitated by focusing on root causes of fire;

(4) Peatlands sustainably managed through enhanced sustainable livelihoods and economic use;
(5) Peatlands conserved to contribute to significantly reduced emissions of greenhouse gases, and increased peatland biodiversity in the region; and
(6) APMS and NAPs implemented, and national and regional capacity enhanced

Objectives: To strengthen national policy and institutional capacity for implementing peatland related strategies and plans and to enhance integrated sustainable peatland management in targeted landscapes.

Project Components: The project is comprised of three components:

Component 1: Enhanced policy dialogue, and improved institutional capacity and arrangement for planning and implementation of peatland related strategies and plans

Outcome 1. Enhanced resources, multi-stakeholder involvement and capacity for implementing the National Action Plan on Peatlands (2011-2020) and for developing peatland-related plans/strategies to guide sustainable management of peatlands in Malaysia

Component 1 will focus on strengthening national frameworks and capacity for the sustainable management of peatland ecosystems in Malaysia – by establishing appropriate supporting mechanisms and procedures and strengthening institutional capacity to effectively implement the National Action Plan on Peatlands (NAPP). It would engage a multistakeholder network of agencies across sectors and levels as well as the private sector, government, civil society and local communities. It will also work to establish the longer term investment and financing framework to support sustainable peatland management in the country.

Output 1.1 Policies and institutional arrangements and capacity enhanced : - through
i) Enhancement of policies and strategies related to peatlands with a view to building coherence between the National Physical Plan Policy, National Forestry Policy, National Agriculture Policy, Environmental Impact Assessment (EIA) regulations, Environmental Sensitive Area (ESA) and buffer zone requirements
ii) Supporting the development and adoption of a detailed implementation plan with clear definition of roles and responsibilities for NAPP 2011-2020 which will be integrated into 11th Malaysia Plan (2016-2020)
iii) Improving decision-making and policy implementation capacities for sustainable management through assessment and implementation of capacity building programme; and
iv) Development of a National Action Plan on Peatlands 2021-2030 and incorporation of peatland issues under the 12th Malaysia Plan (2021-2025).
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Output 1.2 Multi-stakeholder partnerships, resource availability and innovative incentives for peatland management improved:
Mid- and long-term investment framework will be developed in collaboration with cross-sectoral institutions to secure an appropriate level of national budget allocation and of co-financing from the private sector and other sources. The investment framework will also lay out clear roles of the private sector and incentive mechanisms looking into the possibilities of utilization of green bonds, sustainable palm oil product certification which will build on existing knowledge on market assessment and scenarios for sustainable palm oil and on the roles of media and civil society and procurement support. More specific feasibility studies to plan incentive mechanisms will be done at the PPG phase. The national government has for the first time allocated a portion of the national budget to support full implementation of the NAPP through 11th Malaysia Plan for 2016-2020. It is expected that with the support of the project an allocation can be made from the national budget to continuously support the implementation of the NAPPs through respectively the 12th and 13th Malaysia Plans for period of 2021-2030. The NAPP will be reviewed and updated through the project, based on the progress of its implementation and further commitment of key and/or relevant stakeholders.

Output 1.3: Knowledge Management and exchange enhanced to support scaling-up of sustainable peatland forest management: The knowledge-sharing mechanism will be established to document and share Malaysia's best practices, including sustainable peatland forest management techniques and approaches, at all levels via multiple

channels. This will support the work to scale up and secure broader adoption of sustainable peatland management approaches especially by the private sector and state governments.

Component 2: Reduction of peatland degradation, and GHG emissions in Selangor, Sabah, Sarawak and Pahang

Outcome 2. Significant reduction in peatland fires and associated haze, and GHG emissions in 1.5 million ha of peatlands in production landscapes in Selangor, Sabah, Sarawak and Pahang.

Component 2 focuses on the sustainable management of peatland outside of protected landscapes to generate climate change, biodiversity, SFM and land degradation benefits. This is because protected landscapes are mostly governed by Integrated Management Plans (IMP). The government's approach to manage non-protected peatland areas is based on the fire prevention and control perspective. In Malaysia land management is under the exclusive jurisdiction of state governments – therefore development of State Action Plans to parallel and facilitate implementation of the National Action Plan on Peatlands adopted in 2011 is critical enabling mechanism. While more than 75% of the remaining peatlands in Malaysia are found in production landscapes notably in Selangor, Pahang, Sarawak and Sabah, a large portion of peatlands in these states have been developed for oil palm and agriculture. A key problem is degradation from over drainage leading to subsidence and increased fire risk. Fire is still used for land clearing by local communities as well as some medium-scale land developers especially in Sarawak State. The focus of the component will be to promote best agriculture, plantation, forest and land management practices across the peatland landscapes to reduce GHG emissions and fire risk.

Output 2.1 State Action Plan on Peatland (SAPP) and Strategy for Peatland Fire Prevention and Control developed and implemented in Selangor, Sabah, Sarawak, Johor and Pahang States. Measures to adopt and practice a cooperative fire prevention scheme will engage State Forestry Department (SFD), Fire and Rescue Department (FRD), DOE, State and Local Governments and communities

Output 2.2 Fire risk and GHG emissions reduced in plantations and agriculture on peat through utilization of best management practices including plantations, smallholders and local communities in collaboration with DOA, Malaysian Palm Oil Board (MPOB) and Roundtable on Sustainable Palm Oil (RSPO) as well as reduction of peatland degradation especially GHG emissions associated with urban development on peatlands including enhancement of water management, subsidence control, fire prevention, buffer zone restoration and conservation.

Component 3: Development and implementation of Integrated Management Plans (IMP) for targeted, important biodiversity sites

Outcome 3: Integrated Peatland Management Plans (IMP) effectively implemented reducing fires, enhancing forest rehabilitation and water management and improving livelihood of local communities in 300,000 ha of critical peatland ecosystems

This component is focused on the conservation and integrated management of selected critical peatland ecosystems of key importance for biodiversity. These sites have been selected through a multistakeholder consultation process between May-December 2014 and endorsed by the National Technical working group and National Steering Committee on Peatlands.

Output 3.1 Enhanced implementation of Integrated Management Plans (IMP) for North Selangor Peat Swamp Forest and Southeast Pahang Peat Swamp Forest
This will include buffer zone implementation (see Annex 1 for project site details), collaborative fire management, forest rehabilitation, water management and community engagement and livelihood enhancement: This activity focusses on two large peatland landscapes – i) the north Selangor peat swamp forest (81,000 ha) and ii) the SE Pahang Peat swamp forest (152,000ha). These are the two largest peatland landscapes in Peninsular Malaysia and are of global significance for biodiversity with more than six restricted distribution endemic fish species and a broad range of other rare and endangered plant and animal species. Integrated management plans were developed for these respective ecosystems in 2014 (by the GEF-IFAD supported ASEAN peatland Forests Project) and 2008 (by the

GEF-UNDP supported Project on Conservation of peatland ecosystems in Malaysia). These ecosystems are gazetted as forest reserves but not as Totally Protected Areas (TPAs). However as a result of the IMPs the two sites obtained a quasi-protected area status. Nevertheless the sites are facing serious threats as a result of drainage and fire. The targeted interventions of the project will be to support the implementation of the management plan, enhance water management and fire prevention as well as the enhanced engagement of local communities in their management. The objective of this activity is to significantly contribute to designate these areas as more formally protected areas in line with the Aichi Target 11 and the Malaysian Government's own target of increasing terrestrial protected area to cover 17% of natural ecosystems.

Output 3.2 Review and update of IMP for Klias Forest Reserve in Sabah, and Loagan Bunut National Park, Sarawak and development of new IMP for Maludam National Park, Sarawak and South Selangor Peat Swamp Forests (including Kuala Langat South and North Forest Reserves). The three sites in Sabah (Klias Forest reserve) and Sarawak (Loagan Benut and Maludam National Park) have the status of Totally Protected Areas (TPAs) and are the only peatland TPAs in these two states. The focus will be on enhancing the sustainability and management effectiveness of these TPAs – by enhancing their management plans to include management of buffer zones outside of the TPAs which have been recently converted for oil Palm cultivation. Work will also be undertaken on the engagement of the local community in co-management of the reserves. This can enhance the long term viability and management effectiveness. All these sites are of global significance for biodiversity conservation (see below section 5 on Global Environmental Benefits for details).

Conformity with GEF Strategies

The Project is aligned to and conforms to the following GEF strategies:

- *BD-1 Program 1:* The project will improve the financial sustainability and effective management of five protected or partially protected peatland landscapes (Malaudam and Logan Benut National Parks in Sarawak; Klias Protected Forest in Sabah; North Selangor and SE Pahang Peat Swamp Forests as described in Annex 1). Financial sustainability will be enhanced through introduction of climate finance options, partnership with private sector and use pay schemes. Management effectiveness will be enhanced through development, refinement and implementation of integrated management plans for the peatland landscapes including buffer zones for adjacent production landscapes. The project will build on the experience and model developed during the ASEAN Peatland Forests Project (2010-2014) on engaging multi stakeholder for Smart Partnerships in protecting peatland ecosystem. The proposed targeted sites meets the requirements of global significant in Annex 3 in that the proposed sites are key habitats for endangered flora and fauna.
- *BD-4 Program 9:* The project will focus on managing the human-biodiversity interface of the five targeted peatland landscapes in line with GEF6 priority to focus on conserving globally significant biodiversity. Threats identified at the proposed protected areas are mainly pressure of development whereby the buffer zones of the sites have been developed for mining, oil palm plantations and agriculture leading to increased drainage and disruption of hydrological balance as well as enhanced fire risks. In order to reduce the human-biodiversity conflicts, the project will introduce or scale up best management practices such as buffer zone management and rehabilitation of affected areas. In addition, the project will work with local communities whose are key stakeholder to enhance sustainable livelihoods and engagement co-management.
- *LD-3 Program 4:* The project will support work of scaling up sustainable land management through the Landscape Approach. The project will work at North Selangor Peat Swamp Forest to refine and implement integrated water resources management plans including, construction of peripheral bunds to prevent subsurface flow to adjacent mining lands and adjustment of drainage systems to reduce subsidence and fire risk. The project will also work with local communities especially those in North Selangor Peat Swamp Forest, Southeast Pahang Peat Swamp Forest, Klias Peat Swamp Forest, Maludam National Park and Loagan Bunut National Park to better manage and protect the peatlands and reduce conflicts with adjacent land uses.
- *CCM-2 Programme 4:* The project is fully aligned with Program 4 to promote conservation and enhancement of carbon stocks in forest and other land use, and support climate smart agriculture. The project will aim to reduce GHG emissions related to drainage and burning of peatland forest, plantation and agriculture systems in the adjacent area of the targeted protected areas and at national level through implementation of National Action Plans on Peatlands and other related Strategy, Policies and Action Plans.

- *SFM-2 Program 5:* The project will support the increased application of good management practices by relevant government, local community and private sector actos within the proposed protected areas. These areas include those that have been burned during dry season especially within the forest reserves and national parks and the buffer zone. This engagement of private sector and local communities in the restoration of peat swamp forests will be enhanced through technical support and incentive mechanisms.

- *Relevant Aichi targets* that the project will contribute to include the following:
  Target 1. Awareness of the values of biodiversity increased by 2020
  Target 2. Biodiversity integrated into national and local development and poverty reduction strategies and planning process
  Target 3: By 2020, incentives (including subsidies) harmful to biodiversity are eliminated, phased out or reformed, and positive incentives for the conservation and sustianable use of biodiversity are developed and applied
  Target 4. Government/business/stakeholders taken steps to achieve/implement plans for sustainable production and consumption within safe ecological limits
  Target 5. The rate of loss of all natural habitats is at least halved by 2020
  Target 7. By 2020, areas under agriculture, aquaculture and forestry managed sustainably, ensuring conservation of biodiversity
  Target 11. By 2020, at least 17% of terrestrial and inland water, especially areas of particular importance for biodiversity and ecosystem services are conserved/managed effectively
  Target 12: By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
  Target 14. By 2020, ecosystems that provide essential services are restored and safeguarded taking into account the needs of women, indigenous and local communities, and the poor and vulnerable
  Target 15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced
  Target 17: By 2020, each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan
  Target 20. By 2020, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources should increase substantially from the current level

4) Incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTF and co-financing:

Without GEF support, co-funding and other leveraged assistance the degradation of peatlands in Malaysia will continue leading to disrupted hydrology, annual fires and associated greenhouse gas (GHG) emissions. Targeted interventions from the project are expected to significantly enhance multi-stakeholder partnership approaches linking the national, state and local governments from different sectors, communities and private sector to develop and manage peatlands in a sustainable integrated manner. In the business-as-usual (BAU) scenario, government efforts related to peatland fires will likely continue to focus mainly on fire suppression and control rather than fire prevention – in other words the symptoms rather than the causes. Enforcement will continue to be ineffective in preventing fires, and government expenditure on fire-fighting will continue to be allocated too late to prevent large scale fires and degradation. It is envisaged that through enhanced cooperation between stakeholders and more focus on prevention at local levels a more effective sustainable peatland management regime can be engendered.

The expected value added of the GEF intervention is securing the global environment benefits related to the reduction in the rate of peatland degradation leading to improved ecosystem services related to biodiversity, carbon storage, GHG emission reduction, and climate regulation. It will also help to support the implementation of the APMS and the NAPP, further contributing to the sustainability of peatland management initiatives. The GEF intervention allows for a multi-stakeholder, multi-level approach to integrated peatland management, involving several sectors. It will also ensure that lessons learned from demonstration and pilot testing will help scale up national, provincial and local land management activities to ensure that the benefits from integrated peatland

management be incorporated into a wider framework, including policies and plans that relate to forests and other land-related resources.

Additionally, the EU and Germany will design or initiate the early implementation stage of peatland projects in Malaysia during the GEF-6 PPG phase (ideally between November 2015 - April 2016 to collaborate with the EU in the project activities). At the time of the first meeting of the ASEAN Task Force on Peatlands, June 2015, both EU and GEF projects did not have an indication of specific country-level activities. The EU-funded Sustainable Use of Peatlands and Haze Mitigation in ASEAN (SUPA) project with investment of EUR 20 million will be designed in 2016 at the same time as the PPG phase. During this time, the allocation of SUPA resources across ASEAN Member States and the focus of national activities will be decided together with ASEAN Secretariat. In close collaboration with EU-SUPA, the German Ministry of Environment (BMUB) is designing the Strengthening Regional Experiences on Sustainable Peatland Management in ASEAN (ASEAN-REPEAT) Project to be implemented from November 2015 to April 2020. While the country activities are not yet decided, it was explained at the peatland task force meeting that the BMUB will focus on: a) technical assistance of long-term & short-term experts; b) equipment needed for carrying out pilot activities and trainings with local partners; and c) small grants to the local partners for carrying out local activities. Malaysia's Peatland Focal Points through their participation at the ASEAN Task Force on Peatlands and as an implementing partner of the proposed GEF project will coordinate the design of three projects at the country level during the PPG phase. At this PIF stage, the project expects co-financing to contribute to scaling-up of component 2 activities across Malaysia and further technical assistance to Component 1.

5) Global Environmental Benefits:

The key global environmental benefits will arise from the protection, rehabilitation and sustainable management of key peatland areas. Rehabilitating degraded areas of peatlands will increase carbon sequestration and reduce GHG emissions. The project is expected to mitigate approximately 3 million metric tons of CO_{2e} from targeted peatlands, through reduced fires, enhanced water management, rehabilitation and avoided forest conversion (see below table for the reduced CO2e per mitigation activity).

Mitigation measures	Ha	Emission reduction tCO_2eq/ha	Total
Fire prevention	7,000	300	2,10,000
Improved water management	15,000	36.4	546,000[8]
Rehabilitation	500	50	25,000[9]
Avoided forest conversion	400	982.5	393,000
TOTAL			**3,064,000**

The project will also contribute to protection of globally significant peat swamp forests, associated carbon stocks and biodiversity. The tropical peat swamp forests feature some of the highest freshwater biodiversity of any habitat in the world and are home to the endangered fauna such as Orang Utan, False Gharial and a range of endemic fish species. Information on endangered flora and fauna species at proposed project sites as in table below (also see Annex 1 for details on biodiversity).

Name of proposed site	North Selangor Peat Swamp Forest	Southeast Pahang Peat Swamp Forest	Maludam National Park	Loagan Bunut National Park	Klias Peat Swamp Forest	South Selangor Peat Swamp Forest
Area	81,000, ha	325,000 ha incl. 87,000 ha of four	43,147 ha	7,000 ha	7,906 ha	8,108 ha with 1,200ha of Kuala

[8] 20cm increased in water level x 0.91 ton CO2/cm x 2 years)

[9] 20cm increased in water level x 0.91 ton CO2/cm x 2 years) + (increased biomass 3.8 tons of carbon sequestered x 3.56 conversion factor of CO2

		designated Permanent Reserve Forests (Pekan, Nenasi, Kedondong and Resak) 152,000 in IMP zone				Langat North Forest Reserve and 6,908 of Kuala Langat South Forest Reserve
Significant value of the sites	The site supports many specialized species of plants and animals, as well as provides a number of ecosystem services, including water supply, flood control and climate regulation. Unique habitat for 107 tree species, 173 species of birds, over 100 species of fishes and rare and endangered mammals such as the Sun Bear, Clouded Leopard, Tapir, and False Gharial.	Provide valuable timber species such as Kempas (*Koompassia malaccensis*) and Ramin Melawis (*Gonystylus bancanus*) and commercial fish species such as Tapah, Toman and Baung. Important habitat for threatened species such as Malayan sun bear, flat-headed cat, white-handed gibbon, small-clawed otter and Malayan porcupine animal species critically endangered: Painted terrapin, Malayan tiger, Asian elephant, Sunda otter civet, hairy-nosed otter, panther, leopard, lesser adjutant stork, wrinkled hornbill, large green pigeon, short-toed coucal, Wallace's hawk-eagle, false gharial and Malayan giant turtle. The Orang Asli, from Jakun subgroup, known as Proto Malays represent a key community in the SEPPSF. A total of 19 Orang Asli villages are found in the vicinity of	There are 61 species of mammals recorded in Maludam which include 15 species of bats and five species of diurnal primates. The Maludam National Park is the only site globally for the conservation of the red banded langur (*Presbytis melalophos cruciger*) which number less than 200, and are now restricted to the remnant patches of tall forests. One of only about five viable populations of proboscis monkey (*Nasalis larvatus*), occurs in the park. As for avifauna, there are 201 species and 24 families of birds including 21 species of paleartic migrants and 5 species of hornbills (including black, pied and rhinoceros hornbills), and	Flora: Nearly 300 species of flowering plants and ferns have been recorded in the peat swamp and riverine forest of Sungai Bunut including ramin. The area surrounding the lake is primarily peat swamp and mixed dipterocarp forest. It is, however extremely rich in birds with more than 200 species recorded including: Darters, egrets, eagles, herons, bitterns, hornbills, kites and kingfishers. 70 species of fish have been recorded.	(1) Globally threatened mammals (IUCN) : ENDANGERED: *Proboscis Monkey Nasalis larvatus;* VULNERABLE: *Pig-tailed Macaque Macaca nemestrina; Malayan Sun Bear Helarctos malayanus* NEAR THREATENED: *Long-tailed Macaque M. fascicularis, Pangolin Manis javanica, Oriental Small-clawed Otter Amblonyx cinereus;* (2) Globally threatened reptiles (IUCN) VULNERABLE: Asiatic Softshell Turtle *Amyda cartilaginea(III)* (3) Globally threatened plants):	Meranti Bunga, a Critically Endangered tree species was recorded inside the forest reserves. Local peat swamp species such as Mersawa paya and Meranti bakau are also found at the forest reserves. Lowland species such as Jelutong are also recorded in the forest reserve. There is a 130ha of Virgin Jungle Reserve located within the Kuala Langat South FR. High value timber species such as *Koompasia malaccensis*, *Shorea teysmanniana*, *Tetramerista glabra* and *Gonystylus bancanus* within the VJR area

		the SEPPSF. Majority of the Orang Asli are still dependent on the forest products.	the rare Storm's stork. There are at least 218 species of flora from various groups of plants are recorded.		CRITICAL: *Hopea pentanervia, Shorea platycarpa;* ENDANGERED: *Shorea teysmanniana;* VULNERABLE: *Combretocarpus rotundatus, Calophyllum havilandii, Gonystylus bancanus, Nepenthes bicalcarata*.	
Disturbances and threats	The main threat is fire with more than 6000ha within the forest reserve severely degraded by regular fires. Much of the site is affected by sub-surface drainage linked to extensive sand and tin mining to the SE of the site. More than 2000 ha have been encroached for agriculture and oil palm activities. A buffer zone covering 14,000 ha has recently been designated but 90% of this area has been developed for agriculture and oil palm plantations. Appropriate land and water management	Mainly state owned (Pahang State Government); about 3,000 ha are private land earmarked for development. The principal threats are reclamation for agriculture or development and non-sustainable logging as well as large scale plantation development on adjacent land. Fire has impacted more than 10,000ha in recent years.	The main threats include encroachment and illegal logging and the development of oil palm plantations adjacent to national park.	Increasing population in surrounding villages and pressure on the land together with an absence of enforcement have resulted in expansion of farming in the park and encroachment into additional high forest areas and heavy level of fishing in the park. Illegal timber extraction also still occurs from time to time. Oil palm plantations at different stages of growth have replaced the cut over forest surrounding the park. Several native fish species are at risk from competition with introduced species (cultivated in fish ponds) released into waterways.	The main threat to the Klias FR is the conversion and drainage of adjacent lands for oil palm and serious fire risks.	The main threats are increasing development activities adjacent to the forest reserves – oil palm plantations and housing development projects increase pressure on the land, low enforcement by the relevant agencies on encroachment into forested area from adjacent private land for agriculture, abandonment of degraded peatland leads to peat fires caused by land clearing, hunters and fishers

	strategies need to be implemented in this land.					
Indicative actions through project	Fire prevention and control, improved water management, implement buffer zone management and forest rehabilitation	Fire prevention and control, forest rehabilitation, development of buffer zone plan and cooperative land uses, promotion of sustainable land management for oil palm plantation on peat adjacent to forest	Buffer zone management includes sustainable water supply to local settlement, expansion of conservation area, regulation on land clearing and conversion in buffer zone/adjacent land	Working with local community to enhance sustainable livelihoods including community forestry and sustainable forestry. Good management practices for oil palm and agriculture will be promoted and restrictions made on alien invasive fish that may be released into the waterways.	Buffer zone management and good management practices on water as well as regulations on land clearing and conversion at adjacent lands	Buffer zone management include sustainable agricultural practices, expansion of conservation area, regulation on urban land development in buffer zone/adjacent land

Rehabilitation and sustainable management of these globally important peatlands will enable them to support these above mentioned species in the longer term. Preventing the degradation of peatlands and encouraging rehabilitation, conserving globally important biodiversity and taking action to promote sustainable land and forest management as stated in the National Action Plans on Peatlands as well as inclusion of those aspects into recently reviewed National Policy on Biological Diversity.

The project will also play a significant role in reducing the degradation of peatlands one of the key fragile ecosystems in Malaysia recognized as a fragile habitat subject to land degradation. The project will work in line with the GEF Focal area strategy and National strategies to address land degradation. It will specifically support enhanced water management, landscape level rehabilitation and fire prevention measures which are expected to significantly reduce peatland degradation.

These actions will contribute towards the fulfillment of Malaysia's obligations under the CBD, UNCCD and UNFCCC.

6) Innovation, sustainability and potential for scaling up:

One of the main innovative aspects of the project will be multi-stakeholder engagement in addressing sustainable peatland management in an integrated way. The engagement of private sector, civil society and local communities working in partnership with government agencies will be more effective compared to conventional sectoral approaches. At the local level the committed resources of the larger private sector plantation companies for Corporate Social Responsibility can help with sustainable management of adjacent peatland areas.

The demonstration of an integrated landscape approach to peatland management is critical to ensure the long-term sustainability of the peatlands; maintaining the integrity of the units is essential to prevent fire and minimize drying and degradation. There are two elements of sustainability the SMPEM addresses: institutional sustainability including stakeholder involvement, and financial sustainability. Experience from the previous GEF-funded ASEAN Peatland Forests Project (APFP), the key stakeholders and relevant line agencies have built up "Smart Partnerships" to tackle peatland related issues. A technical working group was specifically formed to coordinate and facilitate efforts of the different agencies to manage the country’s peatlands in a sustainable manner. The implementation of

the project will examine the function of this technical working group and provide capacity enhancement opportunities (Component 1) as necessary to ensure partnership and collaboration among the difference agencies. Institutional sustainability will be also ensured by providing support to the implementation of National Action Plans on Peatlands (2011-2020) and to expand the scope of peatland-related activities to be covered under respectively the 12th and 13th Malaysian Plans (2021-2025; 2026 - 2030).

As to financial sustainability, mid- and long-term investment framework will be developed in collaboration with cross-sectoral institutions to secure an appropriate level of national budget allocation and of co-financing from the private sector (See Component 1). Based on the investment framework, clear roles of the private sector and incentive mechanisms will be developed, and the PPG activity of feasibility studies to plan incentive mechanisms will further identify the implementation modality of developing and implementing incentive schemes.

The SMPEM scaling up strategy will focus on the following spaces: i) fiscal; ii) policy; iii) institutional/capacity; iv) partnership; and v) learning. As described above, one of the objectives of SMPEM is to rationalize existing resource-use for peatland management and for mobilising additional finance for scaling up integrated peatland management. As such, SMPEM will consolidate the allocation of public finance over the 12th and 13th Five Year Plans (the 11th Plan has already an allocation), and the mobilization of private sector and other finance to ensure that a sustained flow of finance will be available over the short and medium-term for scaling up sustainable peatland management activities beyond the project areas. With regard to policy, the first priority is to facilitate the building of coherence between the various policies so that resource-use inefficiencies are avoided, and institutional roles, responsibilities and obligations clearly defined. Following from this, a National Action Plan on Peatlands for the period 2021-2030, replete with an investment framework, will be developed for guiding the incorporation of peatland issues and allocation of public finance under the 12th and 13th Five-Year Plans. Linked to this is the institutional and capacity strengthening to facilitate a more effective implementation of the actions identified in the NAPP 2021 – 2030. It is however clear that the Government cannot undertake all of the necessary work and as such, emphasis is placed on building strategic partnerhships with the local communities, research institutions and private sector to advance the scaling up agenda. Underpinning all of this work is the creation of a learning space that facilitates the examination of the experience emerging from the field level and to create a feedback loop for informing policy reforms and for scaling up the approaches and techniques that are proven to work. Fundamentaly, the SMPEM seeks to leverage behavioural change at local level in the way rural people invest, produce and manage their natural assets; facilitate adoption of best management practices and a better distribution of benefits by the private sector; and enable Government institutions to formulate evidence-based policy, rational allocation of public resources and be more effective in enforcement and M&E.

2. STAKEHOLDERS. Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes ☒ /no☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

Stakeholders	Roles
Ministry of Natural Resources and Environment	Leading project implementation and coordination at national level as well as overseeing national regulations on Peatlands and their enforcement
Forestry Department of Peninsular Malaysia	Lead-agency for the project implementation
Department of Environment, Drainage and Irrigation Department, Department of Agriculture, Department of Mineral and Geoscience	Supporting project implementation and coordination including responsibility for the documentation and promotion of best management practices
State Agencies	Leading project implementation at the state level including facilitating and implementing State Action Plans
Local community	Key participants in the implementation of the project activities at village level and pilot sites. The model from the APFP of supporting the establishment of formal community groups (such as the Friends of North Selangor Peat Swamp Forest) will be replicated to other targeted sites

Indigenous communities living in and around the targeted peat swamp forests in Pahang, Selangor and Sarawak States	Active participation in the project development. Through enhanced capacities and knowledge on the value of peatlands, sustainable peatland management practices, and income generating opportunities, indigenous peoples can more actively participate in the community development implementation and in any discussion with the private sector or government related to the use of peatland ecosystems. To ensure sustainability of increased role of indigenous communities, the project will develop the IP plan during the PPG phase through a Free, Prior and Informed Consent (FPIC) process.
Private sector	In principle commitments have been obtained from the largest two oil palm plantation companies in the world - Sime Darby Plantation and Felda plantation- to participate at relevant sites. Other private sector companies in the urban development and technology development sectors will also be involved.
CSOs	Facilitating engagement of local communities and development of integrated management plans. Facilitating partnerships and links between community, private sector and local government. Scaling up actions at pilot sites
Research institutions and universities including Forest Research Institute of Malaysia and UPM	Providing technical support for national and state level activities, assisting in monitoring, reporting and evaluation
Roundtable on Sustainable Palm Oil (RSPO)	Encouraging active participation of the RSPO member companies in the project activities, providing tools and guidance for GHG emission reduction through RSPO Emission Reduction Working Group
Global Environment Centre	Technical and operational support partner of the ASEAN Peatland Management Strategy, providing technical backstopping and implementation support to the project including development of partnerships with local communities, private sector plantation companies and technical guidance for fire prevention and peatland rehabilitation
ASEAN Secretariat	Coordinating the implementation of related ASEAN Programme on Sustainable Management of Peatland Ecosystems 2014-2020 and facilitating linkage of project to ASEAN-supported activities and related ASEAN-EU Peatland Programme

3. GENDER CONSIDERATIONS. Are gender considerations taken into account? (yes ☒ /no☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

Project preparation will ensure that gender consideration becomes an integral part of the proposed project strategy. sustainable organic agriculture, fire prevention and management, ecotourism development and suitable agricultural programmes, and sustainable livelihood development activities as well as awareness events such as rehabilitation by replanting and other project activities. The project will also promote community-based and ecological tourism services which will have spin-off benefits for women.

The project will use the community participatory approaches in planning income-generating activities for communities, and as part of this, the project will clarify gender roles and vulnerabilities associated with a gender

differentiated approach. The project will promote the participation of women in the decision-making process in project activities by ensuring the participation of women at the local and national levels in planning and consultation mechanisms. Due to the better integration of women into the new social organizations, their opinions will be better reflected in the short and long-term decision-making for the sustainable management of peatland ecosystems.

Although some previous or on-going projects engaged women's groups for economic activities such as handicraft work, developing and maintaining a local nurseries, ecotourism packages (ex. homestay) there was no concrete study and detailed analysis done on the gender contributions and involvements. At the PPG stage, the socio-economic assessment including gender analysis will be conducted with respect to the upcoming GEF gender responsive results framework.

4. RISKS. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

Risk	Mitigation Measure
Weak enforcement of policies and regulations related to peatland management	• Awareness-raising on the impacts of peatland degradation • Enhancement of monitoring and enforcement measures through capacity building of responsible government units and clarifying the roles and responsibilities in the governance structure
Lack of political will or poor governance	• Linking project activities closely with The National Action Plan on Peatlands 2011-2020 as well as convention related plans and government targets will help avoid barriers related to lack of political will.
Potentially slow implementation of multi-stakeholder integrated management strategies	• Careful selection of project partners (this will include local government agencies and community groups with demonstrated commitment to addressing peatland issues) and through close monitoring and guidance of project activities
Climate change risk including intensification of the periodic El Nino drought is anticipated to occur at some time during implementation of the project (possibly in 2015 or 2016) and could affect some aspects of project achievement	• Fire prevention by sustainable peatland management and community stewardship - combined with better drought prediction and fire prevention measures • Focus on enhancing resilience of peatlands to current and anticipated climate change scenarios • The project will work closely with the Malaysian Meteorological Department (MMD) to detect any early warning signs of El Nino and use the information to adjust the planning of activities especially in the fire prone regions to minimize disruption

5. COORDINATION. Outline the coordination with other relevant GEF-financed and other initiatives.

The project will be coordinated through existing national mechanisms including the National Peatland Steering Committee and the National Peatland Technical Working Group. A "Smart Partnership" mechanism to engage multiple government agencies and other stakeholders will be used in line with the successful mechanism in the earlier APFP. This mechanism will be led by the National Peatland Steering committee chaired by the secretary General of the Ministry of Natural Resources and the Environment (NRE) which involves representatives from five state governments, four federal ministries (NRE, Ministry of Agriculture, Ministry of Housing and Local Government, and Ministry of Science Technology and Innovation) as well as ten technical agencies. This will be supported by the National Technical Working Group on Peatlands chaired by the Director General of the Forestry Department of Peninsular Malaysia (FDPM). The Smart Partnership mechanism established under the earlier APFP

enabled the project and government funds to be shared across different ministries and federal to state levels in a more flexible manner than normal government operations. This mechanism enables joint implementation of plans and activities. State level peatland or wetland working groups will coordinate the activities at state level.

The project will be closely coordinated with, and be an integral part of the ASEAN Programme on Sustainable Management of peatland Ecosystems (APSMPE). As such, the progress of the project will be monitored at a regional level through the Conference of Parties to the ASEAN Agreement of Transboundary Haze and Pollution and the Ministerial Steering Committee for Transboundary Haze in southern ASEAN. The project will establish links and as appropriate exchange mechanisms with other GEF supported projects relevant to peatlands in the region. Links will also be made with the ASEAN REPEAT project supported by the German Government as well as the EU-ASEAN project on Sustainable Utilization of Peatlands and haze mitigation in ASEAN (SUPA) to ensure effective synergy and avoid duplication.

6. CONSISTENCY WITH NATIONAL PRIORITIES. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The project directly supports the implementation of the Malaysian National Action Plan on Peatlands (NAPP) 2011-2020 as well as the associated ASEAN Peatland Management Strategy 2006-2020 (APMS). The project also seeks to achieve the APSMPE targets as detailed under the Goal. Strategy, Action Plan and Programme are being undertaken under framework of ASEAN Agreement on Transboundary Haze Pollution, the first regional arrangement in the world that binds a group of neighbouring states to tackle transboundary haze pollution caused by land and forest fires.

Wetlands including peat swamps and freshwater swamps were included in Malaysia National Biodiversity Strategy and Action Plan (NBSAP) (1998). The Government of Malaysia is currently revising the Second NBSAP. The project will contribute to the implementation of the NBSAP.

Malaysia National Policy on Biodiversity 2015-2025 which is currently being finalised by Ministry of Natural Resources and Environment has included peatland element under the chapter of Terrestrial Habitats – "*it is the edaphic forests that grow in specialized soil conditions, such as the peat swamp, mangrove, freshwater swamp and limestone that are critically threatened by land conversion and extractive activities. Freshwater swamps and peatlands are important habitats for a variety of plants and animals…*" (August 2015 version). It is also covered under Goal 3 Target 7 Key Indicator 7.3 where 10,000 ha of degraded peat swamp forests will be rehabilitated by 2025 and Action 7.3 which requires the implementation of the National Action Plan on Peatlands (NAPP).

- *"Goal 3 – Safeguard all key ecosystems, species and genetic diversity"*
- *"Target 7 – By 2025, vulnerable ecosystems and habitats, particularly limestone hills, forests on ultrabasic soils, wetlands, coral reefs and seagrass beds, are adequately protected and restored"*
- *"Key Indicator 7.3 – By 2025, 10,000ha of degraded peat swamp forests have been rehabilitated"*

Action 7.3: Support the implementation of the National Action Plan on Peatlands The National Action Plan on Peatlands (NAPP) which was adopted by Cabinet in 2011 and runs till 2020 in parallel to the ASEAN Peatland Management Strategy 2006-2020. Peatlands are the most extensive wetland ecosystem in Malaysia. They provide critical ecosystem services including water supply, flood control, carbon storage and well as being home to many unique, rare and endangered species. Less than 2% (55,000ha) of our peatlands are located within totally protected areas. Peatland degradation has led to flooding, water shortages, peat fires and haze. We need to:

(a) Support implementation of the NAPP in particular the objectives related to assessment, protection and rehabilitation, integrated management, fire prevention and control.

(b) Undertake further assessments of peatland biodiversity as well as degradation/ protection status and carbon storage and GHG emission.

(c) Gazette remaining peat swamp forests as protected areas

(d) Manage peatlands using an integrated and landscape approach with a focus on water management and develop regulations to control peatland drainage to reduce risk of fire and subsidence.

(e) Effectively prevent fires in peatlands through good water management, control of land clearing and engagement with local communities and stakeholders.

(f) Rehabilitate degraded portions of relatively intact peat swamp forest areas.

(g) Monitor implementation of the plan and prepare a new plan for the period 2020-2030.

Malaysia recognized that capacity building on peatland management that reported in 2008 Report on National Capacity Needs Self-Assessment for Global Environmental Management and National Capacity Action Plan contributed to national effort in supporting towards achievement of Convention of Biological Diversity's targets.

The National Communication Malaysia 2011 to UNFCCC recognized the production of palm oil, particularly those from peatlands, as the potential sources of deforestation and emissions and introduced data collection efforts for voluntary carbon emissions through integrated management of a peat swamp area in Malaysia. Malaysia made a voluntary commitment at the COP 15 to reduce 40% of GHG emission intensity relative to GDP by year 2020 compared to 2005. The 11th Malaysia Plan 2016-2020 reconfirms this target of 40% reduction and specifies action to conserve at least 17% of terrestrial and inland water areas as well as coastal and marine areas and protected areas in an effort to conserve ecological assets to reduce Malaysia's carbon footprint. Malaysia's first Biennial Update Report (BUR) shall be submitted to the UNFCCC by December 2015.

Malaysia's national report on UNCCD implementation (2002) highlighted the importance of peatlands stating that "Peat is a low potential, non-renewable resource, which diminishes with use. It suffers from waterlogging and hyperacid conditions; acute major and minor nutrient deficiencies; subsides irreversibly and disappears when drained; and is prone to fire hazards." Land degradation in Malaysia is most eminent in fragile ecosystems such as steepland, peatland, land with acid sulphate soils. This national report guides the overall approach to peatland by stating that "large-scale exploitation of peatland especially peat swamps is not encouraged as in the natural state, they serve a special function in flood control, being able to absorb large quantities of water. Furthermore, peat is non-renewable resource which disappears with use".

Malaysia joined the UN-REDD Programme in June 2012 but has so far been mainly engaged in regional events with one TA programme to support the national processes. It is expected that the UN-REDD programme will improve data management of greenhouse gas emissions, build capacity of stakeholders to be effectively engaged, develop a national institutional framework for REDD+ which links to a proposed national policy and legal framework for ecosystem services; and design a finance mechanism for the REDD+ implementation. The national REDD+ strategy is still under development. Malaysia has submitted its reference level but this has not considered peatland emissions in detail.

Addressing emissions from peatlands has been highlighted in Malaysia's Indicative Nationally Determined Contribution (INDC) submitted in late 2015 as a framework for Malaysias action up to 2030. This will help guide action under the SMPEM to prepare the National Action Plan on Peatlands (NAPP)for the period 2021-2030 .

7. KNOWLEDGE MANAGEMENT. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project will build on the good KM experience through the ASEAN Peatland Forests Project 2010-2014 which included active documentation of project sites and activities through photos and video records; organization of peer-to-peer learning and exchanges for local communities and government staff; multistakeholder workshops; biannual project steering and technical meetings, etc.

Malaysia's KM approach will follow the below steps:

- To utilize annual meetings and technical workshops of National Steering Committee and Technical Working Group to oversee the implementation of policy measures and any peatland related initiatives by coordinating knowledge sharing sessions or supervision meetings particularly with the EU/Germany co-financing. Also, evidence based knowledge will be synthesized into policy briefs for informing policy dialogue processes. The project will link with the ongoing APSMPE, which will facilitate knowledge exchange at regional level
- To establish KM strategies and subsequently develop a list of target knowledge product outputs. A systematic approach will be adopted for documenting lessons learned and translating them into operational manuals and standard operating procedures
- To effectively and efficiently design, manage, supervise and evaluate the project, GIS and Earth Observation system will be integrated to the project to visually map progress/achievement of project indicators and achievements how to share experiences/expertise with relevant stakeholders

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT[10] OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Dr. Gary William THESEIRA	Operational Focal Point	Ministry of Natural Resources and Environment	26/06/2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies[11] and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email
Margarita Astralaga, Director, Environment and Climate Division, IFAD		1 April 2016	Roshan Cooke	+39 06 5459 2156	ro.cooke@ifad.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

[10] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

[11] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

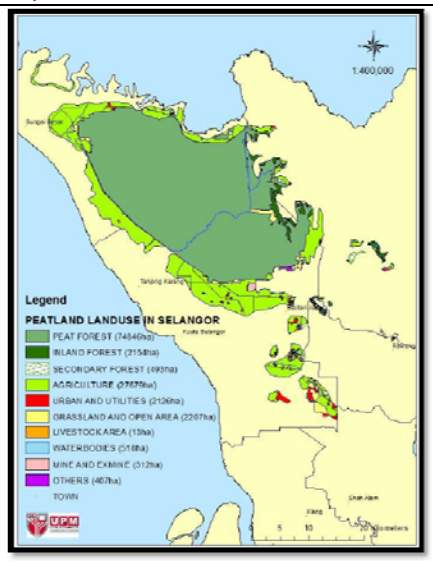
Annex 1

Proposed Project Site Description

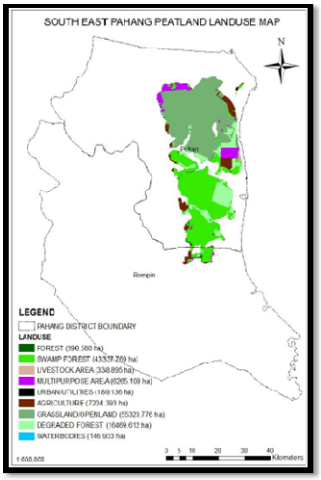
Based on the detailed stakeholder consultation in Malaysia for the development of this proposal – six sites (North Selangor Peat Swamp Forest, South Selangor Peat Swamp Forest, Southeast Pahang Peat Swamp Forest, Maludam National Park, Loagan Bunut National Park and Klias Peat Swamp Forest) have been identified for various types of project activities. Of the six sites, four are forest reserves and the other two are national parks. Four sites have existing integrated management plan (IMP), but the plans are not yet fully implemented. The common issues, faced by the four forest reserves, are encroachment, drainage and fire and impacts from adjacent oil palm and urban development.

For the two national parks (Maludam NP and Loagan Bunut NP), although the sites are officially protected under the law, they still face issues related to catchment management and activities in the buffer zone of the Park such as encroachment as well as development of oil palm adjacent to the park.

1) North Selangor Peat Swamp Forest (NSPSF)

Category	Production Forest
Location	3°25- 42‘N, 101°05- 27‘E. North of Sungai Selangor, north-east of Kuala Selangor, Selangor State
Area	81,000 ha
Description Of Site	 North Selangor Peat Swamp Forest is located in the north western part of the Selangor State and it covers an area of 81,000 hectares. It is one of the largest remaining contiguous areas of peat swamp forest in Peninsular Malaysia. 
Significant value of the site:	The site supports many specialized species of plants and animals, as well as provides a number of ecosystem services, including water supply, flood control and climate regulation. Unique habitat for 107 tree species, 173 species of birds, over 100 species of fishes and rare and endangered mammals such as the Sun Bear, Clouded Leopard, Tapir, and False Gharial.
Disturbances and Threats	The main threat is fire with more than 6000ha within the forest reserve severely degraded by regular fires. Much of the site is affected by sub-surface drainage linked to extensive sand and tin mining to the SE of the site. More than 2000 ha have been encroached for agriculture and oil palm activities. A buffer zone covering 14,000 ha has recently been designated but 90% of this area has been developed for agriculture and oil palm plantations. Appropriate land and water management strategies need to be implemented in this land.

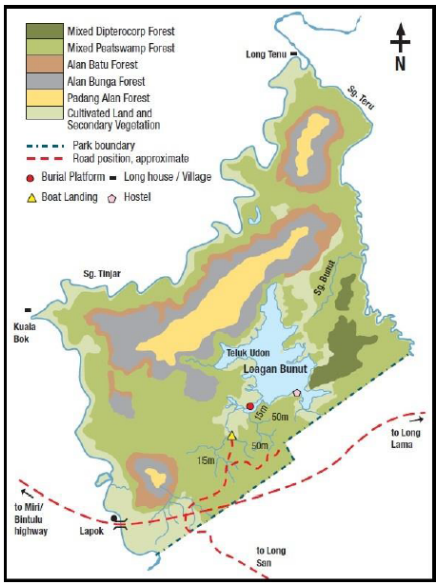
2) Southeast Pahang Peat Swamp Forest (SEPSF)

Category	Production Forest
Location	2°32'-3°48'N, 103°05'-103°38'E; stretching south from Kuantan to the Pahang/Johor border, and extending some 40 km inland from the coast, southeastern Pahang State.
Area	325,000 ha, of which at least 90,000 ha is forest reserve
Description of Site	 Biggest peatlands area in Peninsular Malaysia. The area consists of six blocks: Pahang Swamp Forest, Pekan Swamp Forest, Nenasi Swamp Forest, Rosak Swamp Forest, Rompin Swamp Forest and Endau Swamp Forest. 
Significant value of the sites	Provide valuable timber species such as Kempas (*Koompassia malaccensis*) and Ramin Melawis (*Gonystylus bancanus*) and commercial fish species such as Tapah, Toman and Baung. Important habitat for threatened species such as Malayan sun bear, flat-headed cat, white-handed gibbon, small-clawed otter and Malayan porcupine animal species critically endangered: Painted terrapin, Malayan tiger, Asian elephant, Sunda otter civet, hairy-nosed otter, panther, leopard, lesser adjutant stork, wrinkled hornbill, large green pigeon, short-toed coucal, Wallace's hawk-eagle, false gharial (*Buaya Julung*) and Malayan giant turtle. The Orang Asli, from Jakun subgroup, known as Proto Malays represent a key community in the SEPPSF. A total of 19 Orang Asli villagers are found in the vicinity of the SEPPSF. Majority of the Orang Asli are still dependent on the forest products.
Land Tenure	Mainly state owned (Pahang State Government); about 3,000 ha are private land earmarked for development.
Disturbances And Threats	The principal threats are reclamation for agriculture or development and potential mining. Fire has impacted more than 10,000ha in recent years.

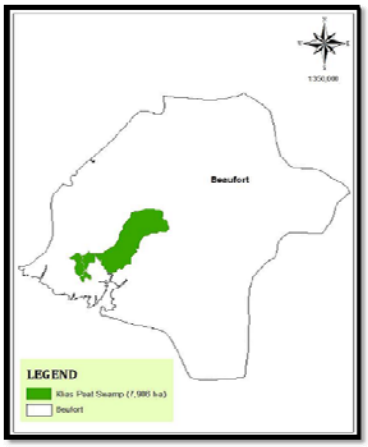
3) Maludam National Park

GPS point	Latitude: °24’ N - 1°40’ N Longitude: 111°0’ E - 111°16’ E
Location	Maludam National Park is located in Betong Division, approximately 80 km east of the state capital Kuching.
Area	43,147 Ha
Description Of Site	 Maludam National Park is the largest Totally Protected Peat Swamp Forest in Sarawak gazetted in May 2000. The park covers a total area of 43,147 hectares with another 10,475ha proposed for park extension.
Significant value of the sites:	There are 61 species of mammals recorded in Maludam which include 15 species of bats and five species of diurnal primates. The Maludam National Park is the only site globally for the conservation of the red banded langur (*Presbytis melalophos cruciger*) which number less than 200, and are now restricted to the remnant patches of tall forests. One of only about five viable populations of proboscis monkey (*Nasalis larvatus*), occurs in the park. As for avifauna, there are 201 species and 24 families of birds including 21 species of paleartic migrant birds and 5 species of hornbills were recorded. There are numerous birds in the Park, including black, pied and rhinoceros hornbills, blue-eared and stork-billed kingfishers, green imperial pigeons, slender-billed crows, greater racket-tailed drongos and occasionally, the rare Storm's storks. There are at least 218 species of flora from various groups of plants are recorded.
Disturbances And Threats	The main threats include encroachment and illegal logging and the development of oil palm plantations adjacent to national park.

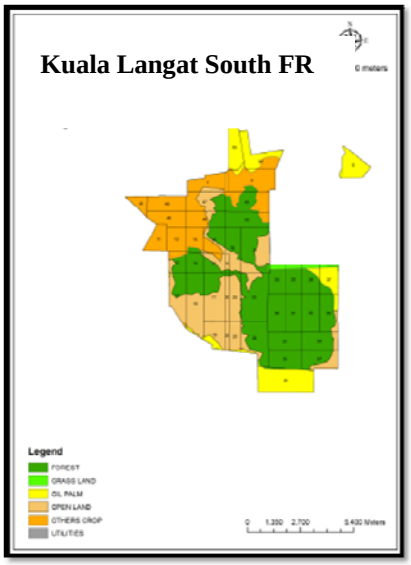
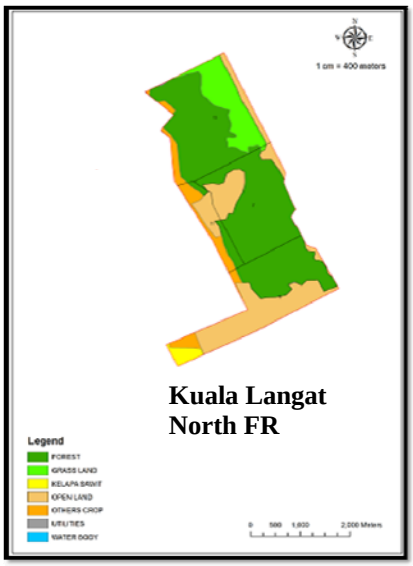
4) Loagan Bunut National Park

Category:	Protected Area
Location	Loagan Bunut National Park is a national park located 130 km from Miri, Sarawak, Malaysia, on the Borneo island. The park was named after the Loagan Bunut lake nearby, which is connected to Sungai Bunut, Sungai Baram and Sungai Tinjar.
Area of peat	7,000 ha
Description Of Site	 The peat swamp forest covers about 7,000 hectares which, together with the large lake, Loagan Bunut (650 ha), comprises the core zone for the site. Loagan Bunut National Park (10,736 ha) protects a complex mosaic of wetland habitats. The lake is fed by the Tinjar and Baram Rivers but water flows fluctuate during the year and when the flow from these rivers drops sufficiently the flow in the Bunut River is reversed and the lake begins to drain. Commonly during a prolonged drought the lake dries up completely leaving a mass of hard sun-baked mud. This normally occurs two to four times a year, in February and in late May or early June / July.
Significant value of the sites:	Flora: Nearly 300 species of flowering plants and ferns have been recorded in the peat swamp and riverine forest of Sungai Bunut including ramin. The area surrounding the lake is primarily peat swamp and mixed dipterocarp forest. It is, however extremely rich in birds with more than 200 species recorded including: Darters, egrets, eagles, herons, bitterns, hornbills, kites and kingfishers. 70 species of fish have been recorded. 
Disturbances and Threats	Increasing population in surrounding villages and pressure on the land together with an absence of enforcement have resulted in expansion of farming in the park and encroachment into additional high forest areas. Illegal timber extraction also still occurs from time to time. Oil palm plantations at different stages of growth have replaced the cut over forest surrounding the park. Two private resort operators are located within the lake area and they feature fishing as one of the attractions in their advertising for the tourist market. However, several native fish species are at risk from competition with introduced species (cultivated in fish ponds) released into waterways.

5) **Klias Peat Swamp Forest**

Category	Protection Forest
Location	South-western Sabah state in Beaufort District
Area	7,906 ha
Description of Site	 In the past, there were over 100,000 hectares of peat swamp in Sabah and almost two-thirds of it was concentrated on the Klias Peninsula, but a large proportion has been degraded by repeated fires. The neighbouring Binsuluk Forest Reserve in particular has been severely ravaged by fire, leaving only the Klias Forest Reserve relatively intact. Currently it is estimated that less than 20,000 hectares of peat swamp forest remain in Sabah as a result of habitat loss through fires and land conversion. 
Significant value of the sites:	(1) Globally threatened mammals (IUCN,) : ENDANGERED: Proboscis Monkey *Nasalis larvatus;* VULNERABLE: Pig-tailed Macaque *Macaca nemestrina;* Malayan Sun Bear *Helarctos malayanus* NEAR THREATENED: Long-tailed Macaque *M. fascicularis,* Pangolin *Manis javanica,* Oriental Small-clawed Otter *Amblonyx cinereus;* (2) Globally threatened reptiles (IUCN) VULNERABLE: Asiatic Softshell Turtle *Amyda cartilaginea(III)* (3) Globally threatened plants (IUCN): CRITICAL: *Hopea pentanervia, Shorea platycarpa;* ENDANGERED: *Shorea teysmanniana;* VULNERABLE: *Combretocarpus rotundatus, Calophyllum havilandii, Gonystylus bancanus, Nepenthes bicalcarata*.
Disturbances And Threats	The main threats to the Klias FR are the conversion and drainage of adjacent lands for oil palm and serious fire risks.

6) **South Selangor Peat Swamp Forest**

Category	Forest Reserve
Location	Southern Selangor State near Federal Capital of Putrajaya and Kuala Lumpur International Airport
Area	8,108 ha comprising 1,200ha of Kuala Langat North Forest Reserve and 6,908 of Kuala Langat South Forest Reserve
Description of Site	Two forested peatlands in a large region of 30,000ha of largely converted and degraded peatlands close to the KL International Airport and new Federal Capital  
Significant value of the sites:	Meranti Bunga, a Critically Endangered tree species was recorded inside the forest reserves. Local peat swamp species such as Mersawa paya Jelutong and Meranti bakau are also found at the forest reserves that add value of conservation of the sites. Rare and Endangered species such as Malayan sun bear *Helarctos malayanus* and the black version of the clouded leopard *Neofelis nebulosa* are recorded from the site. There is a 130ha of Virgin Jungle Reserve located within the Kuala Langat South FR. High value timber species such as *Koompasia malaccensis*, *Shorea teysmanniana*, *Tetramerista glabra* and *Gonystylus bancanus* are found within the VJR area The forest reserves are located near to the Kuala Lumpur International Airport giving good potential for ecotourism
Disturbances And Threats	The main threats are increasing development activities adjacent to the forest reserves – oil palm plantations and housing development projects which are draining and converting peat swamp forest and impacting the landscape hydrology., low enforcement by the relevant agencies on encroachment into forested area from adjacent private land for agriculture, abandoned of degraded peatland which leads to peat fires caused by land clearing, hunting,or fishing activities.