



**LKPROJECT IDENTIFICATION FORM (PIF)**

**PROJECT TYPE: Full-sized Project**

**TYPE OF TRUST FUND: GEF Trust Fund**

**PART I: PROJECT IDENTIFICATION**

<b>Project Title:</b>	Improving Connectivity in the Central Forest Spine (CFS) Landscape - IC-CFS		
<b>Country(ies):</b>	Malaysia	<b>GEF Project ID:</b>	4732
<b>GEF Agency(ies):</b>	UNDP	<b>GEF Agency Project ID:</b>	4594
<b>Other Executing Partner(s):</b>	Ministry of Natural Resources and Environment (NRE)	<b>Submission Date:</b>	11/29/2011 4/4/2012
<b>GEF Focal Area (s):</b>	Multi-focal area	<b>Project Duration (months):</b>	72
<b>Name of parent programme:</b>	N/A	<b>Agency Fee (\$):</b>	1,086,000
<b>For SFM/REDD+ <input checked="" type="checkbox"/></b>			

**A. FOCAL AREA STRATEGY FRAMEWORK:**

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative grant amount (\$)	Indicative co-financing (\$)
BD-2	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation.	Outputs 2.1: Policies and regulatory frameworks (number) for production sectors. Output 2.2: National and sub-national land-use plans (3) that incorporate biodiversity and ecosystem services valuation.	GEFTF	6,662,000	25,074,812
LD-3	Outcome 3.1: Enhanced cross-sector enabling environment for integrated landscape management	Output 3.1- Integrated land management plans developed and implemented Output 3.2 - INRM tools and methodologies developed and tested	GEFTF	1,095,000	4,270,000
SFM REDD+ -1	Outcome 1.2: Good management practices applied in existing forests.	Output 1.1: Payment for ecosystem services (PES) systems established (2). Output 1.2: Types of services generated through SFM Output 1.3 Forest area under sustainable management (Component 2)	GEFTF	2,588,000	5,405,188
Sub-total				10,345,000	34,750,000
Project management cost			GEFTF	515,000	1,750,000
<b>Total project cost</b>				<b>10,860,000</b>	<b>36,500,000</b>

**B. PROJECT FRAMEWORK**

**Project Objective:** Sustainable land and forest management in the Central Forest Spine (CFS) Landscape secures the critical wildlife habitats, conserves biodiversity and maintains continuous flow of multiple ecosystem services (ES)<sup>1</sup>.

Project Component	Grant type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative co-financing (\$)
1. Planning, compliance monitoring and enforcement framework for integrated forest landscape manage-	TA	<ul style="list-style-type: none"> <li>Decision support system, incorporating biodiversity, ecosystem service values and carbon storage, applied in land use planning, allocation and management with the result that there is no net loss of forest cover in the three largest forest blocks of more than 4.5 million ha of forested areas.</li> <li>Well established science-</li> </ul>	<ul style="list-style-type: none"> <li>Strengthened institutional capacity of the Federal Government to implement the CFS Master Plan, with a dedicated specialized unit, ensuring compliance by sub-national actors, and monitoring implementation progress.               <ul style="list-style-type: none"> <li>A GIS based decision support system for landscape management developed incorporating biodiversity and ecosystem services.</li> <li>Strengthened compliance monitoring system under the Malaysian Timber Certification Scheme, through improving the biodiversity / ecosystem service indicator compliance aspects of the forest</li> </ul> </li> </ul>	GEF TF	2,093,000 (BD:1,800,000, LD:293,000)	12,500,000

<sup>1</sup> Ecosystem services water provisioning and regulation, soil protection, scenic landscape value, non-timber forest product, pharmaceutical resources.

ment		<p>based wildlife monitoring system indicates the tiger population in the CFS has increased by 20 % from the current estimated 500 individuals.</p> <ul style="list-style-type: none"> <li>Wildlife Crime Unit (WCU) and MY-WEN effectively functioning, indicated by 100% increase in the average penalty per case of wildlife crimes in Peninsular Malaysia compared with the baseline of 2010.</li> </ul>	<p>management unit audit system.</p> <ul style="list-style-type: none"> <li>The environmental management and mitigation measures hierarchy (avoid-minimize-mitigate-offset) effectively applied in forest land-use planning and management, building on EIA and other tools.</li> <li>A national system for monitoring wildlife (e.g. tiger and prey) populations and habitat conditions established with science-based survey mechanisms and protocols to monitor occupancy of wildlife across the landscape, and tiger densities in priority areas.</li> <li>Enhanced law enforcement and wildlife monitoring capacity emplaced at the national, state and target forest complexes with intelligence-based wildlife trade surveillance system strengthened within the WCU and state departments and effectively linked to the international wildlife trade enforcement network to increase crime interception. Regional WCUs will be established and on-the-ground enforcement operations will be strengthened.</li> </ul>			
2. Sustainable landscape management operationalised in three priority forest complexes within the CFS	INV	<ul style="list-style-type: none"> <li>Biodiversity management/ ecosystem service provision mainstreamed in forest landscape management in the three priority landscapes covering 597,882 ha (Belum-Temengor Complex, Greater Taman Negara – Main Range Ecological Corridor, Endau-Rompin Complex), resulting in improvement in the status of biodiversity and ecosystems services indicated by: (a) the Biodiversity Intactness Index; (b) maintenance of base flow of the watersheds in target landscapes (baseline to be established during PPG); (c) elevation of conservation status of at least 20,000 ha, resulting in higher rates of forest carbon <b>sequestration</b> (to be quantified at the PPG stage); and (d) reducing threats to the adjacent tiger population source protected areas covering 638,055 ha.</li> <li>SFM practices in the demonstration landscapes contribute to: (1) <b>avoiding</b> emissions from deforestation of 1.49 million tC owing to gazettal of at least 20,000 ha of state forests,<sup>2</sup> as recorded in the GEF tracking tools,</li> </ul>	<ul style="list-style-type: none"> <li>A specialized CFS management unit established at the state level with jurisdiction over the target landscapes, charged with development of appropriate incentives and implementation of the CFS Master Plan.</li> <li>Site specific management plans developed for each forest complex, with full participation of local land managers, in particular the local and indigenous communities, defining boundaries, roles, responsibilities and benefits, and agreeing on management and monitoring mechanisms.</li> <li>Ecological connectivity established between and within the three forest complexes, by implementing forest landscape management practices within the linear ecological corridors (primary linkages) and stepping stone corridors (secondary linkages) identified in the CFS Master Plan. Measures for corridor establishment are generally divided into two groups – i.e. physical and socioeconomic measures. <ul style="list-style-type: none"> <li>Physical measures include: 1) new protected area gazettal including proclamation of state forests as protection forests and designation of production forests as protection forests through implementation of <i>Logged-to-Protection Forest</i> practice in line with IFM principles of VCS AFOLU: (<u>funded from SFM</u>)<sup>4</sup>; 2) creation of riparian reserves to secure wildlife corridors and protect water resources, 3) building of wildlife crossing overpass / viaduct in critical ecological corridor facing infrastructural barriers; and 4) rehabilitation of 4,000 ha of degraded forest landscape in line with ARR (Afforestation, Reforestation, Revegetation) Methodology of VCS AFOLU. (<u>funded from SFM</u>)<sup>5</sup>.</li> <li>Socioeconomic measures could include: 1) ecotourism product development and promotion to realize economic benefits from conservation</li> </ul> </li> </ul>	GEF TF	6,252,000  (BD: 4,862,000, LD: 802,000 SFM: 588,000)	16,644,812

<sup>2</sup> Calculated using the conservative estimate of the average carbon density of 115 tC/ha for the state forest, as used in the CFS Master Plan (2011). The 2<sup>nd</sup> National Communication (2011) estimates the Carbon density in different forest types in Malaysia ranges from 70 tonnes per hectare in young or sparse forests to 150 tonnes per hectare or more in intact old growth forest. The assumption is that under the baseline scenario conservatively 65% of the 20,000 ha in question would be logged for production purposes in the next 10 years. The project scenario will protect the forest, by implementing the LTPF practice (Logged to Protected Forest) which falls under the IFM (Integrated Forest Management) category of VCS AFOLU Requirements v.3.0 (version 8 March 2011) [http://www.imaflora.org/upload/repositorio/AFOLU\\_Requirements\\_Cv3.0.pdf](http://www.imaflora.org/upload/repositorio/AFOLU_Requirements_Cv3.0.pdf). The simplified conservative calculation of the avoided C is: 20,000ha\*115tC/ha\*0.65= A detailed calculation will be implemented at the PPG stage using the UNEP-GEF Carbon Benefit Assessment tool or an equivalent instrument.

		and (2) <b>sequestering</b> app. 17,600 tC/y <sup>3</sup> as a result of ARR activities at 4,000 ha . <ul style="list-style-type: none"> <li>The attitudes of local communities towards wildlife improved, indicated by decreased retaliatory killing following human-animal conflicts. (baseline to be determined during PPG.)</li> </ul>	oriented land uses; 2) measures to abate human-wildlife conflicts (compensation scheme, improvement of farming and land use practices to mitigate human wildlife conflict, awareness programme); 3) enhancing the sustainability of community NTFP harvests. <ul style="list-style-type: none"> <li>Biodiversity and ES monitoring protocols integration piloted in the forest management and monitoring system in the target landscapes, using scientifically established indices such as the biodiversity intactness index, and based on refined methodological approaches for carbon stock field assessment.</li> </ul>			
3.Diversification of financing sources for conservation	TA	<ul style="list-style-type: none"> <li>50% increase in public and private investment in biodiversity and ecosystem management in CFS through diverse and new revenue sources, compared with the baseline of 2010 (to be determined during PPG).</li> <li>PES schemes at the landscape level secure biodiversity, land degradation and SFM benefits, with viable payment mechanisms, verification and monitoring system, generating at least RM 30 million per year, as recorded in the GEF tracking tools.</li> </ul>	<ul style="list-style-type: none"> <li>ICT-based ecosystem service valuation tools developed for different types of ecosystem services in target forest complexes, with models for determining trade-offs between land use options based on the value of ecosystem services and other land use values.</li> <li>Implementation of water PES mechanisms in the target landscapes, realizing payments for ecosystems services that will be sustained through CFS implementation. This will entail: development of enabling policy/legal environment, design, negotiation and formalization and operationalisation of the mechanisms, development of a national mechanism for monitoring, reporting and verification of services, and payment distribution mechanisms; awareness and capacity building for decision makers, local government officials and local and indigenous communities, to ensure continuity of ecosystem service provision and payments, in the application of land-use to maximise ecosystem service provision and its continuity over time.</li> </ul>	GEF TF	2,000,000 (SFM: 2,000,000)	5,605,188
Sub-total					10,345,000	34,750,000
Project management cost (BD: 338,000, LD:50,000, SFM/REDD+: 127,000)				GEFTF	515,000	1,750,000
<b>Total project costs</b>					<b>10,860,000</b>	<b>36,500,000</b>

#### C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	NRE, DFPM, DWNP, EPU	Grant	23,100,000
National Government	NRE, DFPM, DWNP, EPU	In-kind	9,000,000
Local Government	State of Pahang, Perak and Johor	In-kind	2,900,000
GEF Agency	UNDP	Grant	1,500,000
<b>Total Co-financing</b>			<b>36,500,000</b>

#### D. GEF RESOURCES REQUESTED BY AGENCY, FOCAL AREAS AND COUNTRY

GEF AGENCY	TYPE OF TRUST FUND	FOCAL AREA	Country name/Global	Project amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEF TF	Biodiversity	Malaysia	7,000,000	700,000	7,700,000
UNDP	GEF TF	Land degradation	Malaysia	1,145,000	114,500	1,259,500
UNDP	GEF TF	Multi-focal area	Malaysia	2,715,000	271,500	2,986,500
<b>Total GEF Resources</b>				<b>10,860,000</b>	<b>1,086,000</b>	<b>11,946,000</b>

## PART II: PROJECT JUSTIFICATION

### A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

**A.1. THE GEF FOCAL AREA STRATEGIES:** The project synergistically addresses the objectives of the Biodiversity (BD) and Land Degradation (LD) focal areas as well as the GEF-5 SFM strategy. The project addresses the BD-2 objective “Mainstream Biodiversity,

<sup>4</sup> SFM funding here, as well as under point 4) is critical as it provides an additional incentive: BD funding alone would not be sufficient to implement the LTPF practice in areas up to 20,000 ha and restore 4,000 ha of forest habitat.

<sup>5</sup> GEF resources will not be associated with the use of exotic species or afforestation approaches.

<sup>3</sup> Calculated using coefficients applicable for the ecological zone and forest type in question, for intensive forest management (plantation with native species) of IPCC Vol.2 AFOLU Chapter 2 (Forests), and IPCC LULUCF Good Practice Guidance, for both above and below ground biomass. The calculations will be refined at PPG.

Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors”, by incorporating measures to conserve and sustainably use biodiversity into land use planning, allocation and management processes within the biodiversity rich Central Forest Spine. The project specifically addresses the threats to biodiversity posed by habitat loss and degradation and the critical threats posed by the poaching of globally endangered species in the Central Forest Spine (CFS). In addition, the project addresses the LD-3 objective “Reduce pressures on natural resources from competing land uses in the wider landscape” by strengthening the cross-sector enabling environment for integrated landscape management through establishment of a decision support system for land allocation and management and operationalising the use of the tools in three large forest habitat blocks. The Project also addresses SFM Objective 1: Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services, inter alia by: (1) piloting Integrated Forest Management practices (Logged to Protected Forest at 20,000 ha and reforestation with native species at 4,000 ha) resulting in permanent reduction of forest degradation threats and enhancement of carbon pools (calculation of carbon benefits provided in Project Framework and will be refined at the PPG), and (2) Operationalising Payment for Ecosystem Services (PES) mechanisms and securing ecosystem services generated in the Central Forest Spine, with benefits to forest dependent people residing in the landscape. The BD and LD interventions, coupled with support targeted at improving forest landscape management, are expected to achieve multiple environmental benefits including improved conservation status of biodiversity, water provisioning and regulation services and the protection of carbon reservoirs.

**A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS:** The Government is committed to improving the sustainability of forest management in biodiversity rich natural forest areas, with the aim of conserving biodiversity and securing critical ecosystem services. The Project contributes towards the implementation of the National Physical Plan (NPP). Developed in 2005 by the Federal Department of Town and Country Planning, the NPP provides a national blueprint for spatial planning, setting out a spatial framework for sustainable development. It is also the key tool for implementing the national programme to combat land degradation under UNCCD<sup>6</sup>. In particular, the Project supports implementation of the NPP’s Policy 19, which states that “A Central Forest Spine (CFS) shall be established to form the backbone of the Environmentally Sensitive Area Network.” The NPP Council, chaired by the Prime Minister, oversees implementation. The NPP informs the rolling 5-year Malaysia Plans that the country prepares, which are geared towards the achievement of the National Development Vision by 2020. The Project directly implements many of the 15 strategies under the National Biodiversity Strategy and Action Plan (NBSAP- 1998) in particular strategies 1 (Improve the scientific knowledge base), 4 (Strengthen the institutional framework for BD management), 6 (integration of BD considerations into sectoral planning strategies) and 15 (Establish funding mechanisms). It also contributes towards implementation of the “Common Vision on Biodiversity” framed by the National Biotechnology and Biodiversity Council in 2009. This lays out a three-pronged approach to biodiversity management i.e.: Strengthening the Protected Areas System; Landscape management for Biodiversity; and Mainstreaming of Biodiversity into Development. The project is directly aligned with the National Tiger Conservation Action Plan 2008-2020 that was finalized in 2010, with the aim of doubling the tiger population by enhancing the connectivity of habitat blocks within the CFS, and decreasing human wildlife conflicts and poaching. The underlying philosophy is that wider benefits will accrue as a consequence, including protection of threatened flora and fauna and multiple ecosystem services.



**B. PROJECT OVERVIEW:**

**B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:** Malaysia is a major storehouse of biodiversity, ranking as one of the World’s 17 megadiverse countries. The flora of Malaysia is exceedingly rich, comprising some 15,000 species of flowering plants, and more than 500 species of ferns and their relatives. Many of these are found nowhere else in the world, with well over 26% of the tree species being endemic. The lowland dipterocarp forest is particularly rich in species diversity. Peninsular Malaysia, which accounts for 40% of the country’s total land area, alone harbours over 8,800 plant species. Faunal diversity is also high. In Peninsular Malaysia, there are about 220 species of wild mammals, including threatened large mammals such as tiger (*Panthera tigris*), Asian elephant (*Elephas maximus*) and Malayan Tapir (*Tapirus indicus*). Peninsular Malaysia also harbours more than 625 species of birds, 250 species of reptiles, 90 species of amphibians and more than 385 species of freshwater fish, and according to conservative estimates, more than 150,000 species of invertebrates.

Malaysia is one of just 14 tiger range countries, harboring the Malayan Tiger sub species. There are an estimated 500 tigers (a sharp decline from the estimated 3,000 in the 1950s). Malaysia signed the St. Petersburg Declaration on Tiger Conservation adopted by the range states at the Tiger Summit in November 2010, committing to achievement of the targets set under the Global Tiger Initiative. Tigers are found exclusively on the Peninsula, which has three main tiger population source sites—all within the country’s CFS. The CFS runs down the length of Peninsular Malaysia, straddling eight states. Covering an area of approximately 5,100,000 ha (>38% of the total terrestrial area and >85% of forest areas in Peninsular Malaysia), 80% of the CFS is classed as Permanent Reserved Forest (PRF), comprising mainly production forests and smaller areas of protection forest designated for protecting water catchments and soil conservation. Of the remaining 20%, 12.4% are protected areas and the rest of the CFS comprises cultivated land under both State and private tenure including plantations of oil palms, rubber and acacia. Large mammals require a vast home range. Protected areas alone

<sup>6</sup> Department of Agriculture (2006) “National Report on the Implementation of the UNCCD: Combating Land Degradation and Promoting Sustainable Land Resource Management in Malaysia”

cannot offer a viable refuge. Connectivity between forest complexes has to be maintained to ensure genetic viability of wildlife species. Therefore, it is paramount to ensure that critical landscapes within the CFS, including PAs and production lands, are managed giving full consideration to wildlife conservation needs as well as those of prey—to the benefit of biodiversity as a whole. The CFS also supplies multiple ecosystem services, including water provisioning and purification, climate regulation, flood and landslide prevention, and carbon storage and sequestration. According to the FAO, the carbon stock of natural forests in Peninsular Malaysia in 2005 was estimated to be 1.139 billion tonnes, of which well over 85% falls within the CFS.<sup>7</sup> In addition, the CFS is the “water tower” of Peninsular Malaysia, embracing many critical watersheds that supply water for 22.3 million people and agriculture and other industries. With a mean annual rainfall of around 3,000 mm per annum, 57% of the precipitation forms surface runoff in Malaysia where as 36% is lost to evapotranspiration and 7% contributes to groundwater recharge. It is expected that Malaysia’s rapidly developing economy and increasing population will increase demand for water significantly in coming decades.<sup>8</sup> Anticipating future water shortages, the Government is developing the National Water Resource Policy (NWRP) under the 10<sup>th</sup> Malaysia Plan to ensure long-term water security.

**Threats:** Notwithstanding its conservation, ecological and economic values, the CFS faces a number of major threats:

- a) **Habitat loss and forest fragmentation** – At the turn of the 19<sup>th</sup> Century, primary rainforest covered over 90% of Peninsular Malaysia. Presently, although forest covers around 45% of the Peninsular, only 9.8% of 13.3 million ha of the land area is classified as primary forest. Vast areas of lowland forest (< 300 m) have been converted to agricultural use; by 1985 the forest cover had diminished to 48.2% of the land area and there was little remaining lowland dipterocarp forest outside of protected areas. Although the rate of forest loss subsequently slowed down, by 2005 the remaining forest area had shrunk to approximately 5.88 million ha, or 44.7% of the total land area. Although the current trajectory of forest cover loss in Peninsular Malaysia is relatively small (<10,000 ha per year), this coupled with forest degradation would mean the release of 1.5 million tons of carbon per year.<sup>9</sup> Habitat loss and land degradation in the highlands is also occurring due to uncontrolled development activities, especially in hill stations. The main vectors of these pressures include commercial agriculture and tourism, which is leading to peri urban development in ecologically sensitive areas. Although the deforestation rate has fallen, owing to small remaining lowland forest areas and economic transformation in Peninsular Malaysia (resulting in industrialization and the development of service sectors), the residual effect of past habitat loss combined with continuing forest fragmentation due to construction of roads, pipelines and railways, and conversion to crop and timber plantation (oil palm, rubber and acacia), pose a threat to biodiversity. In other cases, production forest that is not managed for conservation compromises the integrity of adjacent protection forest (e.g. through the creation of access roads and logging trails that facilitate encroachment and poaching). This fragmentation results in the genetic isolation of populations of endangered species and reduces habitat quality. This is especially true when it comes to large mammals such as tigers which require a habitat block of at least 1,000 km<sup>2</sup> to support a viable population of six breeding females. Furthermore, forest fragmentation severely undermines the quality and quantities of ecosystem services such as water provision and regulation, soil conservation and carbon sequestration. A recent analysis of land use change and water flow and quality data from 1971 to 2005, provides evidence that there is a strong correlation between the base flow in CFS and forest cover above 1,000 m of forests. There is also a clear correlation between the sedimentation loads and forest cover.<sup>10</sup>
- b) **Encroachment, poaching and wildlife Trade** – Although large-scale illegal logging is not regarded as a major threat, it is a growing risk, particularly in remote forest areas in the northern part of the Peninsula. Encroachment (land clearance for agriculture and settlements), poaching and the illegal collection of non-timber forest products are also viewed as growing pressures. Widespread poaching exists, as evidenced by the seizures of smuggled wildlife at border crossings and regional markets. In particular, the long-term survival of the tiger is threatened by the illegal trade in tiger skins, bones and other body parts used in traditional medicines, as well as poaching of prey such as Sambar deer. Tiger populations have been decimated in many parts of their range.
- c) **Human Wildlife Conflict** – Much of the CFS outside of protected areas is criss-crossed by logging roads, allowing access, and contains human settlement enclaves, where livestock is reared and commercial or subsistence agriculture practiced. This has led to an increase in crop damage by elephants and other species, as well as depredation of livestock by large carnivores. There is an average of just over one reported case per year of tiger attacks on humans. These conflicts often lead to retaliatory killings of wildlife by farmers. Moreover, wild ungulates are hunted by some communities to provide protein; this offtake is reducing prey availability in some parts of the CFS.

<sup>7</sup> The estimate is from the FAO publication (2009) “*Malaysia Forestry Outlook Study*.” The study used a default value of carbon fraction factor of 0.5 tonnes of carbon per tonne of dry matter established by the IPCC-GPG, 2003 to estimate the amount of carbon stored in above-ground and below-ground biomass, as well as carbon in dead wood. The default value of 2.1 tonnes per ha of litter carbon stock of mature forests, also based on the IPCC-GPG, 2003, was used to estimate the amount of carbon stored in the litter of the dry inland forests in Malaysia (excluding inundated forests).

<sup>8</sup> Malaysia is relatively water abundant with high precipitation and an extensive watershed. Statistically the country has 21,500 cubic meters per capita per year, but some states are already facing water shortages. In Peninsular Malaysia, projected demand for irrigation water in 2010 comprised 54% of total water demand. or 33,100 million cubic metres. Demand for water excluding the agriculture sector, will grow from the 8,550 million litres per day required in 2009 to 10,520 million litres per day by 2015.

<sup>9</sup> The estimate is based on 150 tonnes per hectare. In the 2<sup>nd</sup> National Communication of Malaysia (2011), the following estimates are used: 150 tonnes of carbon per hectare for intact forests with high biomass; and 70 tonnes of carbon per hectare for sparse or highly degraded forest. According to the 2005 FAO study (footnote 3), the average carbon content of forest lands in Peninsular Malaysia is 193.7 tonnes per hectare.

<sup>10</sup> This analysis is still on-going and to be completed in early 2012. In another study in Lam Dong Province, Vietnam, it was proven that a larger amount of sediment is carried into a stream running through agricultural land or degraded forests, compared with a similar stream running through intact forests. Loss of forest cover decreases the storage capacity of downstream reservoirs, reduces their efficiency and life spans and causes significant financial loss. Additionally, an intact forest regulates the flow of water, minimizing flash floods. The economic value of forest watershed services in terms of sediment retention and water flow regulation, was calculated to be US\$ 69 per ha per year to the region’s hydropower projects. A successful PES scheme was established on this basis. Forest fragmentation also releases CO<sub>2</sub> in the atmosphere and undermines the forests’ ability to sequester carbon, resulting in decreased potential for generating carbon credits.

**Baseline:** In 2011, the Government of Malaysia finalized the CFS Master Plan. This identifies 32 critical ecological corridors critical to linking major forest blocks. The Master Plan provides detailed and costed action plans for achieving the Government's vision: to establish a physically and functionally unbroken forest link from the northern tip of the Peninsular to the southernmost state of Johor. The Ministry of Natural Resources and Environment (NRE) is charged with implementation of the Master Plan through the Department of Wildlife and National Parks (DWNP) and the Department of Forestry - Peninsular Malaysia (DFPM). The total necessary cost of implementing the Master Plan is estimated to be in excess of US\$ 257 million, with the majority of the cost attached to land acquisition and wildlife corridor development. In addition, the imputed cost of setting aside the state forest land for conservation purposes is estimated to be over US\$ 1.3 billion. The Government aspires to implement the Plan in the next 15 years through the 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup>, 5-year Malaysia Plans, and has so far allocated US\$ 1.83 million to DWNP in order to establish a corridor to the North of Taman Negara NP. It is also expected that the Government will allocate US\$ 5.3 million to the NRE's CFS unit in establishing the ecological linkage within the Belum-Temengor Complex in Perak State. In addition, a CFS project budget (US\$ 317,000) has been allocated to the DFPM for necessary data gathering, field survey and rehabilitation of degraded areas inside the PRFs. The DFPM's annual budget for CFS management is estimated to be US\$ 13 million per year, excluding infrastructure costs and land acquisition.

DWNP allocates US\$ 12.7 million per year for wildlife conservation and law enforcement and the Economic Planning Unit is allocating US\$ 330,000 for a survey of tiger and prey populations in the tiger landscape focusing on Taman Negara National Park. The DWNP initiated the Malaysian Conservation Alliance for Tigers (MYCAT) in 2003, which is an alliance of conservation organizations, including the Malaysia Nature Society, WWF, Wildlife Conservation Society (WCS) and TRAFFIC Southeast Asia, with the objective of saving the Malayan tiger in the wild. In the attempt to control poaching and illegal trafficking of wildlife, Malaysia's Parliament passed the International Trade in Endangered Species Act in 2008, and the new Wildlife Conservation Bill in May 2010 to repeal the 38-year-old Protection of Wildlife Act. The new law, which came into force in December 2010, provides significantly higher penalties and mandatory jail terms for a wide range of wildlife crimes. WCS is supporting a tiger conservation programme in the Endau-Rompin Complex with an annual budget of US\$ 400,000 per year, entailing support for patrols by DWNP, JNPC, Forest Dept rangers and systematic monitoring of tiger population, prey occupancy surveys and environmental education activities. WWF has been supporting tiger conservation since 2002 through its Tigers Alive programme. The current phase III (2008-2011) with the funding of US\$ 820,000 focuses on the establishment of ecological linkages in the Belum-Temengor forest Complex.

The majority of the CFS is production forest is certified under the Malaysian Timber Certification Scheme. The Government also issued a national guide for identifying, managing and monitoring high conservation value forest in 2009, and investing in research to develop a best timber harvesting protocol that provides sustainable yields while minimizing impacts on biodiversity.<sup>11</sup> The Government has embarked on a REDD plus readiness process, establishing a dedicated unit within the NRE. With US\$ 280,000 (2011-2012) from the Federal budget combined with a US\$ 700,000 grant from the UNDP, the Government is developing a national REDD plus strategy, including baseline setting, LULUCF monitoring, MRV, and development of an institutional framework and capacity for implementation.

**Long-term vision and barriers to achieving it:** The baseline activities fall short of the proposed long-term solution of sustainable land and forest management in the CFS landscape which secures critical wildlife habitats, conserves biodiversity and secures flows of multiple ecosystem services. For this, there is a need to secure ecological connectivity between forest blocks and engineer a paradigm shift from site focused management (i.e. of protected areas) to landscape management, which not only provides a viable tool for integrated land management but also offers cost-effective measures for achieving connectivity. This needs to be coupled with efforts to reduce poaching and the illegal trade of wildlife. There are three main barriers hampering the achievement of this long-term vision.

*(a) Weak institutional framework for planning, compliance monitoring and enforcement for integrated forest landscape management:* Under the Federal Constitution of Malaysia, land allocation and management are under the jurisdiction of state governments. Similarly in terms of forestry administration, although overall guidelines and standards are set at the Federal level, the state governments are empowered to enact laws and formulate policy on land and forestry matters and manage the resources. Despite the development of the CFS Master Plan covering eight states in Peninsular Malaysia, there is no automatic annual budget allocated for implementation of the Plan in particular to the state governments, nor is there sufficient capacity within the NRE for ensuring actual implementation and for monitoring compliance by State and local governments. Currently, land use and management decisions are made without due consideration to biodiversity, ecosystem services attributes, carbon accounting, and ecological linkages as identified under the CFS Master Plan. This is mainly due to the fact there is no decision support system based on baseline information, which the Federal and state governments can use. Similarly, although all the production forest areas in Peninsular Malaysia are certified under the Malaysian Timber Certification Scheme, compliance on the ground largely depends on the quality of audits and the availability of tools and benchmarks to gauge biodiversity and ecosystem health. In addition, the environment impact assessment procedure was introduced in 1987 under the Environmental Quality Act, however its application has often been constrained by the constitutional limits on its jurisdiction with respect to environmental management and the lack of clear mechanism to apply the mitigation hierarchy (avoid-minimize-mitigate-offset) in land use planning. Furthermore, a lack of a science-based national system for monitoring biodiversity, in particular of tiger and prey populations and habitat conditions as well as a lack of intelligence based wildlife law enforcement system at both national and local levels are hampering effective control of threats to biodiversity. Capacity to deal with human wildlife conflict is also insufficient, with suboptimal coordination between enforcement agencies (DWNP, State Forestry Departments, Police, customs etc.), resulting in severe illegal harvesting and poaching threats.

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<sup>11</sup> Management of logging is undertaken through the baseline projects. GEF funds will not be used to promote or in support of any exploitation of tropical forests.

*(b) Limited experiences among key government and civil society stakeholders in implementing sustainable forest landscape management on the ground:* Landscape level biodiversity management is a relatively new concept in Malaysia, and each land unit in the remaining major habitat blocks within the CFS is independently managed, whether they are managed by the state and local government agencies, smallholder farmers, the private sector or the communities. There is little coordination between the divisions in the Federal, State and local government agencies, which have jurisdiction over different land units in the landscape, inhibiting the operationalisation of an effective integrated forest landscape management system on the ground. The CFS Master Plan identifies a number of areas between forest blocks that need to be linked, in order to establish ecological connectivity, and suggests different ways and means of achieving the essential connectivity, through both physical and socioeconomic measures. However the Plan remains an official proposal from the Federal Government; implementation rests with state Governments. There is currently no legally binding system to ensure that land holders comply with the Master Plan. There is also insufficient know-how and incentive for landholders, public or private, to implement the Master Plan. There is an unmet need to test the different means for achieving connectivity, and action in this regard is constrained by insufficient incentives and weak landholders' capacities for internalising biodiversity conservation and sustainable land and forest management in land management activities. For instance, there are no frameworks and working examples of integrated forest and land management practices at the landscape level within the CFS, and there is no established monitoring protocol for biodiversity and ecosystem services in CFS, on which to base the landscape level planning. Human wildlife conflict around settlements exacerbates the problem.

*(c) No mechanisms to compensate for land uses for conservation of biodiversity and ecosystem services:* The CFS provides vital and irreplaceable ecosystem services. The CFS is vital for providing water and protecting water quality to the 22.3 million people in Peninsular Malaysia (80% of Malaysia's population) as well as to Singapore. It regulates water runoff during times of heavy rain, reducing flood events, and prevents soil runoff that increases the siltation of hydroelectric reservoirs. These services are essential to ensure future water and electricity supplies in Peninsular Malaysia, which are envisaged to become scarce as water and electricity demands are expected to surge with the rapid economic development of the country. CFS also offers natural forest products such as rattan for local populations and nationally important nature-based tourism resources. However, these ecosystem services and their economic values are not fully recognized, and the land managers in the CFS do not have sufficient incentives to effectively manage the land for biodiversity and ecosystem conservation and increase the protection areas to enhance protection and connectivity. As a result, the cost of keeping the intact forest is borne by the state governments and local communities. For the state governments to be able to set aside sufficient amounts of forest lands for conservation, there needs to be stronger recognition of the ecosystem services value and they need to be able to derive income from such land use. Forest communities need to have incentives for keeping the forests and biodiversity in good condition. Although there has been a growing interest in the establishment of payment for ecosystem services (PES) schemes in the country, no such mechanism has been established to date. There are numbers of specific barriers in developing and implementing PES. These are : (i) knowledge gaps on ecosystem services for informed policy making on defining land use planning and incentive schemes; (ii) inadequate provincial policy and regulatory framework to realize PES; (iii) institutional and operational capacity weakness for PES including systems and mechanisms for transparent payment for services and standards and oversight to ensure the adequate delivery of services; (iii) almost non-existent practical experience of PES application; (iv) lack of awareness on ecosystem services and PES among the local stakeholders including communities and private businesses.

**B.2. Incremental/Additional cost reasoning: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) AND THE ASSOCIATED Global environmental benefits TO BE DELIVERED BY THE PROJECT:**

The objective of the proposed project is **sustainable land and forest management in the CFS Landscape to secure the critical wildlife habitats, conserve biodiversity and maintain a continuous flow of multiple ecosystem services, including water provisioning, carbon storage and sequestration through the removal of the aforementioned barriers.** The project will greatly enhance the timely and cost-effective implementation of the CFS Master Plans, by realizing synergetic impacts from BD, LD and SFM investments through capacity building and establishment of integrated landscape management system, and diversification of financing sources for conservation management.

**Component 1: Planning, compliance monitoring and enforcement framework for integrated forest landscape management**

This component will support strengthening the compliance monitoring and enforcement framework for integrated forest landscape management, removing the aforementioned barriers at the national and state levels. In order to maintain the security of the CFS, through implementation of the CFS Master Plan, the project will support establishment of a dedicated specialized unit in the Federal Government to develop a system to promote compliance with the Master Plan, and development of a decision support system incorporating multiple ecosystem values that can be applied in land use planning, allocation and management. EIA process will be strengthened at the state level, strengthening EIA regulations in relations to set clear standards for each of the three categories of Environmentally Sensitive Areas (ESA) established under the NPP, with stringent application of the mitigation measures hierarchy (avoid-minimise-mitigate-offset). Training on the use of the EIA tools will also be supported targeting state and local practitioners. A science-based national system for monitoring tiger, prey population and habitat conditions will also be established. Capacity for wildlife crime law enforcement will be enhanced. These measures will include development of science-based survey mechanisms and protocol for monitoring across the CFS landscapes and tiger densities in priority areas, and institutionalization of a mechanism to coordinate and monitor the development, maintenance and functioning of corridors for tiger movement. Capacity of the Wildlife Crime Unit (WCU) and existing state level units will be strengthened, to control the illegal wildlife trade, which poses significant threats to wildlife. Three additional state level WCUs will be established, intensifying the local presence of enforcement officers enhancing interception and prosecution capacities. An intelligence-based national wildlife trade surveillance system will be operationalised within the WCU both at the Federal and state levels. At the target landscape site level, the intelligence driven anti-

poaching patrol strategies will be developed and implemented. This is expected to lead to Malaysia's effective participation in international wildlife enforcement networks. The project will further support strengthening of coordination and deployment of a multi-agency enforcement task force, involving the WCUs, police, customs, border security personnel, enhancing law enforcement at main roads and border points. Use of community members in law enforcement efforts will be encouraged where appropriate and training and mobilization of community wildlife guards will also be supported

**Component 2: Sustainable landscape management operationalised in three priority forest complexes within the CFS – Belum-Temengor Complex (354,600 ha), Endau-Rompin Complex (238,900 ha) and Taman Negara Priority Corridor (100,000 ha)** Under this component, the project will work in up to three priority landscapes within the CFS, to realize sustainable forest landscape management establishing the priority corridors set in the CFS Master Plan. Building on component 1, the project will mainstream biodiversity in forest landscape management with an aim to maintain biodiversity intactness in the landscapes. This will be achieved through operationalisation of landscape management, through the establishment of a specialised landscape management unit at the state level, charged with implementation of the CFS Master Plan. The Unit will spearhead landscape level sustainable forest and land planning and management, creating a forum for coordination among different land owners and managers within the landscapes. The Unit will also spearhead development of site specific management plans for critical ecological corridors in each forest complex, ground truthing and refining the preliminary plans contained in the CFS Master Plan in order to make it viable and implementable. The management plan will be developed with the full participation of local land managers in particular the local and indigenous communities, defining boundaries, roles, responsibilities and benefits, and agreeing on management and monitoring mechanisms.

The Master Plan identifies a number of measures for corridor establishment, which can be divided into two groups, namely physical measures and socioeconomic measures. Physical measures include: (i) new protected area gazettal including proclamation of state forests as protection forests and designation of production forests as protection forests through implementation of Logged-to-Protection Forest practice in line with the IFM principles of VCS AFOLU; (ii) creation of riparian reserves to secure wildlife corridors and protect water resources, (iii) building of wildlife crossing overpass / viaduct in critical ecological corridor facing infrastructural barriers; and (iv) rehabilitation of at least 4,000 ha of degraded forest landscape in line with ARR (Afforestation, Reforestation, Revegetation) Methodology of VCS AFOLU, to connect forest blocks and re-establish wildlife corridors. Rehabilitation work will be conducted with participation of local community members, providing them job opportunities. Socioeconomic measures include: (i) ecotourism product development and promotion to realize economic benefits from conservation oriented land uses; (ii) measures to abate human-wildlife conflicts (compensation scheme, improvement of farming and land use practices to mitigate human wildlife conflict, awareness programme); (iii) enhancing the sustainability of community NTFP harvests. Local and indigenous communities will need to be part of the decision making and implementation process to ensure the linkage that will be established will be viable and sustainable. In particular, in order to ensure sustainability of socio-economic measures, it is critical to ensure that any measures are developed with the full participation of local stakeholders and is implemented by them. For instance, local communities will be involved in Human-Wildlife Conflict mitigation (specifically elephants), through possible activities such as development of community based wildlife tourism in elephant conflict areas to make elephants an income generating local asset rather than a perceived nuisance. Realisation of tangible benefits to the custodians of natural resources is also a key for sustainability. Ecotourism operation must directly benefit land and resource managers.

In order to mainstream biodiversity in forestry management in CFS landscapes, biodiversity and ecosystem service monitoring protocol will be developed and integration in the forest management and monitoring system will be piloted, using scientifically established indices such as the biodiversity intactness index, and based on refined methodological approaches for carbon stock field assessment. Where appropriate, the ecological monitoring activities will be conducted jointly with or by the local and indigenous communities..

### **Component 3: Diversification of financing sources for conservation**

This component will support the establishment of incentives for the conservation of ecosystem services in the form of PES, so as to secure the long-term protection of the CFS. The project will support complementary interventions at both systemic and pilot landscapes, providing long-term institutional support for national and state governments by means of training and development of tools to mainstream the value of ecosystem services in to the national and provincial policy and regulatory frameworks. Such ecosystem service valuation tools for different types of ecosystem services will include models for determining trade-offs between land use options. Institutional and individual capacities for using such tools and integrate PES mechanisms into local land allocation and management systems will be enhanced. The project will support the development of PES schemes in the target landscapes, focusing primarily on forest ecosystem services that affect water provisioning and hydro power generation. The principal sellers are the state governments and the small holders including indigenous communities. The potential buyers will be water and energy utility companies.<sup>12</sup> In Peninsular Malaysia, there are 21 hydroelectric dams with the capacity to generate 1,911 megawatts (MW). Under the 10<sup>th</sup> Malaysia Plan, two additional hydroelectric plants are to be commissioned, in Ulu Jelai and Hulu Terengganu, with a combined generating capacity of 622 MW. Water supply is managed by private companies on a concession basis. Under the 10<sup>th</sup> Malaysia Plan, the National Water Resource Policy (NWRP) is being developed. The NWRP will outline measures and a long-term strategy for water resource management to achieve water security, including measures to secure water quality and adequate quantity, the completion of privatization of state water authorities, and tariff setting aiming for full cost recovery. The project will support

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<sup>12</sup> In Lam Dong Province, Vietnam, a PES system was established with hydropower companies as buyers. The ecosystem services were valued at US\$ 69 per hectare per year, of which US\$ 15.6 was attributed to the benefits accrued from water regulation and US\$ 54.4 for reduction of sedimentation.

inclusion of the notion of cost recovery of production ecosystem services in the policy and in relevant policies in the electricity and other related sectors.

Based on experiences and lessons learned in Asia and globally, the project will support different stages of PES scheme development. The project component development will fully take into account the STAP advisory notes on the PES and GEF.<sup>13</sup> This will entail ecological and microeconomic assessment including necessary valuation studies of ecosystem services to provide baseline estimates which are essential for developing PES schemes, as well as spatial threats assessment for the target area and a microeconomic assessment and cost-benefit analysis for major land use types. Landscape level biodiversity conservation management and action plans will also be developed to provide the rationale and basis for piloting sustainable conservation finance mechanisms in the target landscapes. Concurrently, the project will support identification and negotiation with the financial intermediary to broker sales and monitor compliance. Capacity building and awareness raising activities will be supported as critical elements for establishing successful PES schemes. Capacity building activities will include training targeting decision makers, local government officials, utility companies and community members, on various disciplines including forest valuation, environmental monitoring, field surveying and spatial modeling. Awareness raising on the importance of biodiversity conservation and ecosystem services will be supported through thorough a consultation process and will engage the full participation of affected communities based on the Free Prior Informed Consent principle, during the project development and implementation phases. The project will support the development of PES agreements between the seller and buyer, which will clearly define the responsibilities of different parties, a system for service provision monitoring and evaluation, and the timing and amount of payments as well as the benefit distribution mechanisms.

Under the baseline scenario, globally significant biodiversity in Peninsular Malaysia and associated ecosystem services will continue to be severely threatened. Despite the significant efforts of the Malaysian Government described in the baseline section, without implementation of the integrated landscape management approach at the State and local levels, and without changing the economic development paradigm based on a thorough understanding of the economic value of the CFS and development of viable PES mechanisms, the CFS will continue to become further fragmented. The project will engineer a paradigm shift from the current unsustainable practices to sustainable land and forest landscape management practices that conserve globally significant biodiversity including the tiger population and other species such as Elephants, Malayan Tapir and Clouded Leopard and secure multiple ecosystem services.

Current Practice	Project Alternative
<i>Land-use planning, allocation and management:</i> Individual land units in the CFS, in particular in the corridor areas, are managed independently without ecological connectivity or without consideration to integrated natural resource management.	NPP will be fully translated into local-level land use plans and management, and decision support tools and capacity are built for integrated natural resource management in order to establish connectivity under the CFS Master Plan. A specialized landscape management unit within the state governments will engender joint management of the corridor areas, ensuring ecological connectivity and realization of economic and social benefits. Connectivity and wildlife corridors will be re-established through rehabilitation using indigenous tree species.
<i>Forest management:</i> Production forests within the PRF in Peninsular Malaysia are all under the Malaysian Timber Certification Scheme which includes biodiversity and ecosystem safeguards. However, the relevant sections in the FMPs tend to be general with weak enforcement and monitoring frameworks. There is also a lack of a forest landscape level biodiversity and ecosystem management framework. State forests outside the PRF are not really managed and prone to conversion, encroachment and degradation and poaching. Communities including indigenous communities utilise forest resources for their livelihoods, but with ambiguous utilisation right and with no land ownership.	National system for monitoring wildlife and habitat conditions, as well as effective biodiversity indicators will be developed to enable CFS and landscape-wide biodiversity monitoring. This will inform biodiversity/ecosystem management requirements of different FMUs and land units. Biodiversity and ecosystem service maintenance will be mainstreamed into management of state forests and production forests, triggering establishment of new protection forests and measures to minimize impacts of forest use on biodiversity. Biodiversity and ecosystem service monitoring protocols integration piloted in the forest management and monitoring system in the target landscapes, using scientifically established indices such as the biodiversity intactness index, and based on refined methodological approaches for carbon stock field assessment. The protocols will be implemented through collaborative operation between state forestry departments, state wildlife departments, NGOs, local communities and other co-implementers. Incentives will be developed for local communities to practice sustainable forest management, through strengthening the user rights and rewarding conservation oriented management practices.
<i>Agriculture:</i> Plantations (predominantly oil palm and rubber) and other farming areas are managed for the short-term maximum profit without due consideration for long-term sustainability and their role in CFS corridor establishment, leading to soil erosion, pollution, loss of BD and ecosystem services	In pursuit of implementing the CFS Master Plan and associated landscape level plan, plantations and farming areas will adopt environmentally and socially responsible practices, including appropriate measures to minimize and control erosion and degradation of soils, effective management of pests and diseases, enhancement of habitat for indigenous flora and fauna through a combination of forest and riverine conservation areas within the farming estate.

The immediate **global benefits** are sustainable management of 5,100,000 ha of predominantly forested land in the tropics with an array of globally significant biodiversity, as well as achievement of Malaysia’s targets set under the Global Tiger Initiative. Through safeguarding of the tiger landscape (or the CFS), by making production activities compatible with BD conservation and maintenance of multiple ecosystem services, as well as by realising payments for the ecosystem services, the project is directly contributing to

<sup>13</sup> The STAP advisory note identifies four potential threats to PES effectiveness: (i) non-compliance with contractual conditions; (ii) poor administrative selection (i.e. contracts are offered to areas or individuals who are not in the best position to supply environmental services cost-effectively); (iii) special demand spillovers (a.k.a., general equilibrium effects, or “leakage”) whereby protecting a resource in one location pushes pressure onto resources elsewhere; and (iv) adverse self-selection, where people would have supplied the contracted PES service or activity even in the absence of a payment. Therefore every GEF PES project proposal is expected to describe design choices to minimize these threats and specify indicators that will permit one to evaluate the importance of these threats in the project.

arresting and reversing the global trends in land degradation in particular deforestation. Using the SFM incentive of the GEF will allow to review what would be possible with BD and LD funding alone, and would help create simultaneous biodiversity and carbon benefits, such as: (1) elevating official protection status of 20,000 ha resulting in high rates of forest carbon sequestration [to be quantified at the PPG stage]; (2) moving 20,000 ha of valuable forest from state forests or production forests status to protected forests status in line with the IFM (Integrated Forest Management) principles of VCS AFOLU, resulting in avoidance of 1.49 million tC emissions; (3) rehabilitating 4,000 ha of vital tiger habitat using native species reforestation in line with ARR category of VCS AFOLU, which will trigger sequestration of some 17,600 tC/y. (*Use of coefficients is explained in footnotes to Table B*); (4) development of viable PES mechanisms, diversifying types of services generated through SFM, under Component 3.

**B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS. AS A BACKGROUND INFORMATION, READ [Mainstreaming Gender at the GEF](#):** Securing the CFS will have significant socioeconomic benefits to the county at both national and local levels. Nationally, it means ensuring continued supply of ecosystem services for Malaysia, in particular securing water resources. It will also prevent the enormous cost, both in terms of asset loss and human lives, of possible natural disasters including floods and landslides. Locally, communities, especially indigenous communities, will continue to be able to benefit from access to improved forest resource base, including NTFP and tourism resource. Safeguards will be put in place for continued access, through full participation of community members in the landscape level management planning and implementation process, with agreed sustainable use regimes and monitoring mechanisms. In order to ensure socioeconomic benefits and their sustainability, local level activities will be carried out with the participation of local stakeholders, with full consideration given to gender dimensions. Many local level activities will be implemented by local stakeholders themselves. Establishment of PES mechanisms will not only generate necessary revenues for the governments and communities for conservation actions, but also provide the world a good model for low carbon, climate resilient development. In addition, by protecting the globally significant tiger population and other endangered wildlife, Malaysia's attraction as a major tourism destination (tourism is already the 2<sup>nd</sup> largest contributor to the GDP) will continue to increase, with a real potential for substantially increasing tourism revenue and employment creation. The secure CFS will also provide amenity, scientific research opportunities and spiritual and cultural values. Following the UNDP and GEF gender policies and strategies, in the activities across the two components, special attention will be placed on gender equity, and in particular ensure full participation of women in consultations on human wildlife conflict mitigation as well as integrated natural resource management, and land-use planning processes.

**B.4. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVES FROM BEING ACHIEVED, AND IF POSSIBLE, PROPOSE MEASURES THAT ADDRESS THESE RISKS**

Risk	Level	Mitigation
Poaching pressure fuelled by the existence of global illegal wildlife trade may fast decimate the tiger population	M-H	Given the high level of this risk, one of the pillars of the Project design is to increase Malaysia's capacity for surveillance and intelligence driven law enforcement in the CFS and at border posts, to fully implement the existing wildlife laws. It will also strengthen the country capacity for effective participation in regional and global networks to eliminate wildlife trade.
Implementation of the CFS master plan may encounter resistance from production sectors such as infrastructure and agriculture, and local communities	M	The project will work towards developing capacity of local government officials and stakeholders in different sectors for translating the CFS master plan into local land-use and development planning. The process will be done with full participation of the stakeholders in government, non-government and the private sector, and including women, fostering understanding of the need for striking the right balance between development and safeguarding of biodiversity. Human wildlife conflict mitigation measures will also be supported, such as promotion of compatible land uses in wildlife ranges. An effective communication strategy and stakeholder involvement plan will also be developed and implemented, for stakeholder support.
The Federal and State Governments may be reluctant to increase conservation areas with a fear of losing state revenues.	M	The project will invest in development of a decision support system for land-use, with valuation tools for different types of ecosystem services, with models for determining trade-offs between land use options based on the value of ecosystem services and other land use values. With the UNDP co-financing, the project will conduct a thorough feasibility study on PES mechanisms in Malaysia, and will demonstrate actual monetisation of the value through developing the PES mechanism for ecosystem services generated within the CFS landscape.
Land unit managers including logging companies behave undesirably leading to multiplication of roads and forest trails, and consequent development of agriculture.	L-M	The project targets strengthening of compliance monitoring and enforcement to reduce the risk of undesirable behaviours on the part of individual land unit managers. Establishment of landscape level management fora and landscape level management planning through participatory processes, as well as robust implementation of monitoring mechanisms for biodiversity will work towards minimising the risk. Development of PES schemes is expected to work as an incentive for good behaviour and peer monitoring pressure.
Climate change may undermines the conservation objectives of the Project	L	The Project will work to address the anticipated negative impacts of climate change by increasing resilience of the forest landscape, through promoting sustainable management of large-scale landscape in the CFS. Maintenance of large-scale resilience is critical in securing flow of ecosystem services and avoiding irreversible ecosystem regime shifts, which may be caused by climate.

**B.5. IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES, AS APPLICABLE:**

STAKEHOLDER	RELEVANT ROLES
Ministry of Natural Resources and Environment (NRE)	Federal Government Ministry to be the national executing agency for the project. It is responsible for biodiversity conservation, wildlife and forest management as well as REDD plus readiness, and houses key departments such as: Department of Forestry (the national executing agency of the project); Department of Wildlife and National Parks (principal implementing partner of the project); Department of Irrigation and Drainage (JPS), which is an important stakeholder in water resource management in CFS. NRE also supervises statutory organizations such as: Forest Research Institute of Malaysia (FRIM), which is an important co-implementer of the CFS-wide biodiversity and ecosystem services monitoring

	activities; and the National Hydraulic Research Institute of Malaysia (NAHRIM), which can significantly contribute with its data set to .
Economic Planning Unit	Federal Government Agency responsible for national economic and development planning., as well as development of strategies and policies in determining financial allocations for the various sectors of the national economy
State Governments	State Governments in the CFS landscapes are critical stakeholders in ensuring the security of the priority areas and corridors in their respective state, as forestry policy formulation and implementation is responsibility of the State Forestry Departments, rather than the Federal Forestry Department.
Energy Commission	The official regulator for the energy industry in Peninsular Malaysia and Sabah. The Commission was established to ensure that the energy industry is developed in an efficient manner so that Malaysia is ready to meet the new challenges of globalization and liberalization, particularly in the energy supply industry.
Ministry of Housing and Local Government	Key Ministry responsible for planning, coordinating and implementing excellent and sustainable living environment for Malaysian people. The department of Town and Country Planning, the initiator of the National Physical Plan, falls under this Ministry.
Ministry of Agriculture and Agro-Based Industry	Federal Government Agency responsible for planning and implementation of policies, strategies and agricultural development programmes.
Ministry of Works	Federal Government Ministry responsible for infrastructural development and providing policy and regulatory framework for the construction sector.
Ministry of Transport	Federal Government Ministry responsible for the planning, formulation and implementation of transport policies, and implementing and monitoring development programmes for the transport sector.
Utility companies	Water suppliers and electricity suppliers such as Tenaga Nasional Berhad are important partners for the PES component, as potential buyers of the ecosystem services.
Federal Land Development Authority (FELDA)	Government agency charged with handling the resettlement of rural poor into newly developed areas. It focuses on opening smallholder farms for the ethnic Malay population growing cash crops. It operates 880,000 hectares of plantations, mainly across Peninsular Malaysia and therefore is a key stakeholder in CFS implementation and landscape planning and management in target landscapes.
Malaysian Timber Certification Council - MTCC	MTCC implements the Malaysian Criteria and Indicators for Forest Management Certification, setting the standards and monitoring compliance. MTCC and their auditors are key stakeholders and co-implementers of the project in particular in the components to strengthen compliance monitoring.
Financial institutions	Potential financial intermediary to broker sales of ecosystem services and monitor compliance.
State Parks Corporation	Johor National Parks Corporation and the Perak State Park Corporation manages state parks in respective state, and will be a key player as land managers in the project target landscapes.
Local communities	Key users and beneficiaries of the forest biodiversity. They are the affected parties of human wildlife conflict, and play a major role in local habitat conservation and controlling of poaching. Important co-implementers of landscape level activities including development of landscape management plans, designing and implementation of socio-economic measures to establish ecological connectivity, as well as participatory biodiversity and ecosystem service monitoring and wildlife protection activities.
MYCAT	Alliance of conservation organizations, including the Malaysia Nature Society, WWF, Wildlife Conservation Society (WCS) and TRAFFIC Southeast Asia, with the objective of saving the Malayan tiger in the wild. It coordinates implementation of the Tiger Conservation and Action Plan and includes wildlife scientists. Therefore it is an important stakeholder to the project and possible collaborator for developing science based wildlife survey mechanisms and protocols and their application in the target landscapes.
WCS	WCS supports a tiger conservation programme in the Endau-Rompin Complex, entailing support for patrols by DWNP, JNPC, Forest Dept rangers and systematic monitoring of tiger population, prey occupancy surveys and environmental education activities. Important stakeholder/collaborator and possible co- implementer of landscape level actions on the ground, especially in the Endau-Rompin Complex.
WWF	WWF has supported tiger conservation since 2002 through its Tigers Alive programme. The current phase III (2008-2011) focuses on the establishment of ecological linkages in the Belum-Temengor forest Complex. Important stakeholder/collaborator and possible co-implementer of landscape level actions on the ground, especially in the Belum-Temengor forest complex.
TRAFFIC Southeast Asia	Southeast Asia chapter of TRAFFIC - a global wildlife trade monitoring network, working to ensure that trade in wild plants and animals does not threaten conservation of nature. Important stakeholder and possible co-implementer of some activities under the wildlife monitoring system strengthening component of the project, in particular the intelligence-based national wildlife trade surveillance system strengthening linked to the international wildlife trade enforcement network. .
ASEAN-WEN	The Association of Southeast Asian Nations Wildlife Enforcement Network (ASEAN-WEN) coordinates the regional response to illegal trade in protected species, which threatens biodiversity, endangers public health, and undermines economic wellbeing. Important stakeholder and possible collaborator/co-implementer of some activities under the wildlife monitoring system strengthening component of the projects.
Indigenous community organisations	Organisations such as JKOA working for indigenous community rights will be important stakeholders in landscape level activities including PES development, and will be involved in implementation of relevant activities, as well as being represented in the landscape level steering committees.
Tourism business	Tourism operators, concessionaires, lodge owners in the target landscapes will be key stakeholders in the projects, in support of landscape management plan development and implementation and development of alternative livelihoods based on community based tourism.
Logging sub-contractors	Important stakeholders for implementation of the biodiversity/ecosystem monitoring and

**B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:** GEF currently supports a broad range of initiatives in Malaysia, including a medium size project for biosafety and a marine protected area strengthening project. The project will build on the outputs, outcomes and lessons emanating from the GEF/UNDP supported Conservation of Biological Diversity through Improved Forest Planning Tool Project, which is developing decision making tools for determining timber harvesting protocol and regime in order to contribute to improvement in the maintenance of biodiversity and ecosystem services in tropical forest landscapes managed

primarily for timber production. The project will also closely collaborate with two upcoming GEF/UNDP financed projects in Peninsular Malaysia and Sabah: The “Enhancing Effectiveness and Financial Sustainability of Protected Areas Project”, which will establish a performance based payment mechanism to strengthen PA management, as well as supporting improving management effectiveness within the PAs; and the “Biodiversity Conservation in Multiple-Use Forest Landscapes in Sabah” project, aiming to institutionalise a multiple-use forest landscape planning and management model within the State of Sabah. Increase in management effectiveness of the PA systems in Peninsular Malaysia will directly complement the objectives of the proposed projects. The multiple-use forest landscape planning and management pilot and the development of alternative revenue generating mechanisms such as biodiversity offset schemes, REDD+ and other PES schemes will provide tools and experiences that could be adapted to the situations in the target states in Peninsular Malaysia. Coordination with other initiatives for tiger conservation described in the baseline section will be assured through MYCAT.

**C. DESCRIBE THE GEF AGENCY’S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:**

**C.1. INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY IS BRINGING TO THE PROJECT:** UNDP is investing a total of US\$ 1.5 million from its core resources, in support of PES mechanism development including capacity building for REDD plus in Malaysia, and in support of mainstreaming of NPP in the state and district spatial and development planning process. UNDP is also leveraging a total of US\$ 35,000,000 from federal and state governments.

**C.2. HOW DOES THE PROJECT FIT INTO THE GEF AGENCY’S PROGRAMME (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:** UNDP’s strategy in environment and energy is to support transition to low carbon and climate resilient development. The UNDP’s Biodiversity and Ecosystems Programme has a large portfolio of biodiversity mainstreaming projects, with 55 projects in 45 countries globally. With respect to SFM, UNDP is central to implementation of the UN-REDD programme. UNDP is working in 29 countries around the world on SFM and REDD+, focusing on forest governance frameworks, planning, and monitoring. In the UNDP operation in Malaysia, the project fits within the UNDP Country Programme Document (CPD), covering 2008-2012, directly contributing to the achievement of CPD Outcome 3 “Improved environmental stewardship through sustainable energy development and environmental management”. In particular, the project will contribute to the component outcomes of “Enhancing environmental management of biodiversity and natural resources, including water resource management” by implementing the intended output of “implementation of improved integrated ecosystem management”. The project also directly implements the intended output of “incorporation of NPP elements into structure and local plans” under the component outcome of “Incorporation of environmental considerations into planning and development of non-environmental agencies”. The UNDP Country Office (CO) will assign an experienced biodiversity conservation programme manager within the Energy and Environment Unit, guided by the head of the Unit and supported by the alternate, administrative assistant, and the UNDP finance office. The UNDP Regional Technical Adviser based in Bangkok will provide technical support to the CO for implementation, monitoring and evaluation of the project.

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

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

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Dr. Lian Kok Fei GEF Operational Focal Point	Undersecretary, Environmental Management and Climate Change Division	Ministry of Natural Resources and Environment	November 26, 2011

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
Yannick Glemarec, Executive Coordinator, UNDP/GEF		April 4, 2012	Midori Paxton, Regional Technical Advisor – Ecosystems and Biodiversity, UNDP	+66- 818787510	midori.paxton@ undp.org