



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT INFORMATION

Project Title:	Maximizing carbon sink capacity and conserving biodiversity through sustainable conservation, restoration, and management of peat-swamp ecosystems		
Country(ies):	Thailand	GEF Project ID:	5330
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4951
Other Executing Partner(s):	Ministry of Natural Resources and Environment (MONRE)	Submission Date: Resubmission:	Mar 9, 2013 April 12, 2013
GEF Focal Area (s):	Multi Focal Areas	Project Duration (Months)	48
Name of parent program (if applicable): • For SFM/REDD+ <input checked="" type="checkbox"/> • For SGP <input type="checkbox"/>		Agency Fee (\$):	317,719 (306,319+11,400)

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK¹:

Focal Area Objectives	Trust Fund	Indicative Grant Amount, (\$)	Indicative Co-financing, (\$)
CCM-5	GEFTF	1,977,945	7,987,208
BD-1	GEFTF	436,544	1,685,577
SFM/REDD-1	GEFTF	809,911	3,287,215
Total Project Cost		3,224,400	12,960,000

B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To conserve and restore peat-lands to increase their capacities to act as carbon sinks, as habitats for globally important species, and as sources of ecosystem services for improved livelihoods

Project Component	Grant Type ²	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1. Expanding protection of high conservation value peat-swamp forests and demonstrating their sustainable use within broader landscape	TA	<p>Integrated approach to peat-swamp forests management implemented at a 128,000 ha Kuan Kreng Environmental Conservation Area, including:</p> <ul style="list-style-type: none"> - 13,000 ha of high conservation peat-swamps (raised peat-bogs) put under protection, enlarging the presence of peat-swamps in PA estate by 62% - Zoning arrangements at surrounding economic areas as a model for wider landscape integration of peat-swamp forests - Sustainable peat-swamp forest use 	<p>Output 1.1: Feasibility study and designation documentation finalized for Government approval on formal designation of Kuan Kreng as Environmental Conservation Area (equivalent to IUCN Cat.IV).</p> <p>Output 1.2: Participatory management plan, with functional zones identified in consultative way designed, economic regimes within zones around natural and secondary peat-swamp forests reconciled with ecosystem requirements, and boundaries of conservation areas and economic zones clearly demarcated.</p> <p>Output 1.3: Kuan Kreng sub-district land use plans adjusted to reflect the new zones: drainage, arable agriculture, and large-scale oil palm excluded from permissible activities; alternatives (krajoed grass harvesting, fishing, sustainable NTFR) delineated in land use plans. Enforcement system put in place to monitor compliance with adjusted land use regimes within the ECA.</p> <p>Output 1.3: ECA administration unit equipped with patrolling and enforcement capacities.</p>	GEFTF	1,000,000 (BD: 370,000; SFM/REDD: 560,000; CCM:70,000)	3,860,686

¹ Refer to the reference attached on the [Focal Area Results Framework](#) when completing Table A.

² TA includes capacity building, and research and development.

		<p>promoted through community forests at 5,000 ha</p> <p>Release of pressures such as oil palm plantation encroachment and fires on the peat-swamp ecosystems, ensuring preservation of the 24 mln tC pool and habitat of IUCN Red List Species (<i>ref. to main text for detailed description of BD values</i>)</p>	<p>Output 1.5: Community forest support scheme in Kuan Kreng: local co-management committees supported (representing protected areas administrations, forest administrations and local communities). For those areas designated primarily as conservation areas, the project would provide support to communities for livelihoods which can be implemented in natural peat swamp or grassland without disrupting the hydrological regime or vegetation cover (<i>kra-jood grass collection, fishing, other activities pending PPG feasibility study</i>).</p>			
2. Implementing technologies to avoid peat-swamp forest degradation and restore degraded peat-swamp forests	TA	<p>Avoided degradation of 4,300 ha of high nature value peat-swamp forests, preventing emissions of 953,095 tCO₂-eq from peat oxidation and 546,137 tCO₂-eq from peat fires (20-year direct emissions; <i>ref. Section on global benefits for details</i>)</p> <p>Sequestration of additional 59,558 tCO₂-eq (20-year perspective) from reforestation at 300 ha of peat-swamp forests</p> <p>Peat-swamp carbon monitoring system designed and integrated in the national UNFCCC reporting protocols</p>	<p>Output 2.1: Hydrotechnical facilities constructed at 5 blocks of natural primary and secondary peat-swamp forests in Kreng sub-district and 4 blocks in neighboring sub-districts to prevent encroachment of the degraded oil palm plantations and fires.</p> <p>Output 2.2: Native tree reforestation of areas damaged by storms and fires in Kreng sub-district (300 ha).</p> <p>Output 2.3: Peat swamp carbon flux monitoring system set up based on Tier-1 methodology of 2013 IPCC Wetlands Supplement, complimented by 3-4 sample plots for camera / subsidence measurements to obtain more precise site-specific data; set-up in Kuan Kreng (for disturbed and secondary peat-swamps) and Kunthulee peat-swamps (primary undisturbed peat-swamp) for comparative data reference.</p>	GEFTF	1,500,000 (CCM: 1,450,000; SFM/REDD: 50,000)	5,792,214
3. Improving policies, standards and enforcement mechanisms for conservation and sustainable use of peat-swamp forests	TA	<p>Effective national policy framework for management of peat swamps addresses degradation threats and stipulating ecologically optimal management regimes for all peatlands in Thailand</p>	<p>Output 3.1: <i>National Strategy for Peat-swamps</i> (NSP) defines optimal peatland management regimes for all key peat-swamp areas in the country, institutional roles and responsibilities in planning, financing, and management of peat-swamps.</p> <p>Output 3.2: Specific criteria and methodologies for assessment of peat-swamp values, functions, and services (incl. economic potential, habitat support, resilience capacity & carbon sequestration) developed and approved.</p> <p>Output 3.3: A comprehensive inventory of peat-swamps completed (using the criteria and methodologies from the previous output), as an important input for the NSP.</p> <p>Output 3.4: Standards for avoidance and mitigation of encroachment of oil-palm plantations and fires on natural peat-swamps designed and mechanisms for their enforcement integrated in the NSP.</p>	GEFTF	570,857 (BD: 45,756; SFM/REDD: 161,344; CCM: 363,575)	2,659,100
Subtotal					3,070,857	12,312,000

Project Management Cost (PMC) ³		GEFTF	153,543	648,000
Total Project Cost			3,224,400	12,960,000

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

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	MONRE-ONEP(OCCC)	Grant	6,560,000
National Government	MONRE-ONEP (biodiversity)	Grant	4,560,000
National Government	MONRE-DNP	Grant	1,210,000
GEF Agency	UNDP	Grant	550,000
Private Sector	Private Sector	Grant	30,000
Local Government	Tambon Administrative Offices (TAO) at project sites	In-kind	50,000
Total Cofinancing			12,960,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
UNDP	GEF	CCM	Thailand	1,977,945	187,905	2,165,850
UNDP	GEF	BD	Thailand	436,544	41,472	478,016
UNDP	GEF	SFM	Thailand	809,911	76,942	886,853
Total Grant Resources				3,224,400	306,319	3,530,719

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

E. PROJECT PREPARATION GRANT (PPG)⁴

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)⁵</u>
• No PPG required.	_____	_____
• (upto) \$50k for projects up to & including \$1 million	_____	_____
• (upto)\$100k for projects up to & including \$3 million	_____	_____
• (upto)\$150k for projects up to & including \$6 million	<u>120,000</u>	<u>11,400</u>
• (upto)\$200k for projects up to & including \$10 million	_____	_____
• (upto)\$300k for projects above \$10 million	_____	_____

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF ROJECT ONLY

Trust Fund	GEF Agency	Focal Area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
GEF	UNDP	CCM	Thailand	76,850	7,301	84,151
GEF	UNDP	BD	Thailand	16,961	1,611	18,572
GEF	UNDP	SFM	Thailand	26,189	2,488	28,677
Total PPG Amount				120,000	11,400	131,400

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

³ To be calculated as percent of subtotal.

⁴ On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁵ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

PART II: PROJECT JUSTIFICATION⁶

PROJECT OVERVIEW

A.1 Project Description

Global environmental problems.

Peatlands are one of the planet's major carbon pools, irreplaceable habitat for threatened species, sources of organic fertilizer, raw materials for chemistry, textiles, insulation materials, balneological, therapeutic and medical products; natural providers of clean water, regulators of micro-climate, soil and hydrological conditions, effective means for controlling fires, erosion, floods, contamination. Globally, there are approximately 400 million ha of peatlands (3% of the world's land area), containing up to 528,000 megatonnes of carbon (about 1/3 of the global soil carbon). The largest areas of peatlands occur in South-East Asia, which alone has about 27.1 million ha. Tropical peatlands, such as those in Thailand, have been accumulating carbon 4.5 times faster than temperate peatlands. They also store more carbon than other tropical forests that are on non-peat soils: a 10 m deep peatland in the tropics stores about 5,800 tC/ha compared to 300-800 tC/ha for tropical forests on other soils.

By various estimates, there are between 64,000 and 75,000 ha of peatlands (=peat-swamps) in Thailand, of which the majority are found in the provinces along the south-eastern coast, particularly in Nakhon Si Thammarat (Kuan Kreng landscape) Surat Thani, and Narathiwat Provinces. They comprise a diversity of land cover classes, including predominantly woodlands (raised bog peat swamp forests), but also non-forested wetlands (open fens and lakes), and flooded grasslands. Kuan Kreng is the second-largest peatland landscape in Thailand, with still substantial parcels of non-degraded peat-swamp ecosystems. This is a 31,287 ha landscape stretching across five districts of Nakhon Si Thammarat Province and one district of Phattalung Province. About half of the area has been designated as a national "Non-Hunting" protected area (Thale Noi and Borlor)⁷, which includes zones of strict protection (including two Ramsar sites). The other half of the area are forest reserves (under the jurisdiction of the Royal Forestry Department – RFD, also under MONRE), and includes areas with settled and unsettled land ownership claims from local communities. The area has relatively large population density and high economic use demands. There are 33 villages in the area, with a population of around 15,000 people, who are primarily engaged in rice farming, rubber tree and oil palm planting, and some fishery and livestock activities at approximately 1,000 ha of drained peatlands in the periphery of the landscape, close to natural and secondary peat-swamp forest tracts. The peatland is a major source of water critical for ecosystems and human settlements in the Songkhla Lake Basin and Pak Panang Basin, supporting agricultural production while buffering from the impact of rains and floods; additionally, it acts as a natural sediment filter before waters drain into Songkhla Lake. Local communities fish, collect food and medicinal plants and NTFP for handicraft production, from natural peat swamp forests.

Kuan Kreng represents a major store of carbon (58 million tC). Within the landscape, there are areas with well preserved peat and vegetation layer (some primary but predominantly secondary forest). In addition to the carbon values, such parts house important biodiversity including a number of endemic and/or globally threatened species: surveys have produced lists containing 260 plant, 77 bird, 10 mammal and a number of key freshwater species: including globally threatened Catfish - *Prionailurus viverrinus*, Smooth-coated Otter - *Lutrogale perspicillata*, etc.

In 2002, Thailand's peatlands were sequestering 2,482,336 tons of carbon per year; by 2008 their sequestration capacity fell to 1,694,653 tC/ha (Source: national papers used in preparing the UNFCCC National Communications). The area of natural peatlands with sequestration capacity reduced due to threats described below.

- *Encroachment of oil palm plantations.* Peat swamp forests in South East Asia and Thailand in particular have historically been drained and converted primarily to oil palm and rubber tree plantations. In Kuan Kreng alone, over 1,000 ha has been converted for oil palm, both by large-scale private investors and by small-scale farmers. The drainage for oil palm has lowered the ground-water table to 20-70 cm below soil, drying the peatland thus exposing peat to fires and mineralization. By conservative estimates of the authors of the IPCC 2013 Wetlands Supplement, CO₂ emissions from tropical peatlands drained for oil-palm are 40.33 tCO₂-eq/ha/y, as well as emissions of dissolved organic carbon through the drainage ditches. No buffer zones have been established between oil palm plantations and remaining peat swamp forests, which produces a vicious-cycle of peat land loss: the plantations' drainage networks work as constant draining effect on neighboring natural swamps, those would degrade as a result, and communities or investors find it easier to obtain permit to add new areas to their existing plantations pointing that those have degraded recently (which is easy due to policy barriers described below), and they further extend their drainage ditches that in effect would again initiate a new wave of degradation of additional peat-swamps. In the driest seasons, the oil palm plantations owners use water from the drains for irrigation and that has a further draining effect on the neighboring peat land areas. In addition to the effect on carbon fluxes, the construction of numerous flood barriers, roads, canals and other facilities associated with oil palms results in the deceasing of fish production and lowers the biological diversity of the peat swamp forests.

⁶ Part II should not be longer than 5 pages.

⁷ Non-hunting areas are a type of national protected area category, and is governed by Department of National Parks, Wildlife, and Plant Conservation (DNP) of the Ministry of Natural Resources and Environment (MONRE)

- *Fires.* Since much of the peatlands have been drained, dry peat catches fire extremely quickly. These include unintentional or intentional fires (to clear land or burning by encroachers and hunters to flush out prey) cause large-scale peat fires in peat-swamp especially during the dry seasons (January – March). In 2010, in Kuan Kreng Peat-swamp alone, fires affected 3,200 ha of peatlands. A wildfire on a drained tropical peatland results in a loss of a record 747.11 tCO₂/ha + 9.21 tCH₄/ha (Page *et al.*, 2002; Ballhorn *et al.*, 2009; Christian *et al.*, 2003).

Other threats of secondary importance are stemming primarily from unsustainable use of peatlands by local communities due to low awareness of the value of peat-swamps and lack of alternatives for “wet” use of these ecosystems. This includes unsustainable logging as many local communities cut trees for use as firewood. Also, villagers often harvest *Melaleuca cajuputi* for making charcoal or construction support materials at some sites, doing so in an unsustainable way.

The threats of drainage for oil palm plantations and fires work as a sequence. In the beginning of the 20th century, Kuan Kreng peat swamp was covered almost entirely by primary peat-swamp forest. After much of it was drained for economic use, the ecosystem was exposed first to storms (due to disrupted soil root zone capacities) and later to fires. During the 1950s almost 70% of the original primary tree vegetation was destroyed by storms, which was followed by a series of fires during periods of drought. Consequently, the primary peat swamp forest shrank and even though some of areas affected by storms and fires regenerated as secondary forest, they remain constantly under threat of further conversion and new fires. By estimates, about 65% of Kuan Kreng landscape stays under constant threat of degradation from various threats.

Root causes and barriers that need to be addressed

Inadequate protection of the primary and secondary natural peat-swamps. By 2012, just some 30% of peat swamps have been included in the national protected area system, which is approximately 21,000 ha, all of which are primarily fen peatlands found in the Northern part of the country. Very few (precise statistics are not available) another unique type of peatlands - raised peat-bogs (those found in Southern provinces such as Kuan Kreng peatland) are currently protected as a national protected area. The baseline program on protected areas, described further, does not have sufficient resources to enable expansion and more effective protection of peatlands. Especially in Kuan Kreng, the population density is among the highest in the country, much of the areas is constantly under land use pressure for more oil palm production or small scale farming, and given these complexities, the Government has not been able so far to fully engage communities in dialog on the establishment of the Environmental Conservation Area. A proposal to gazette Kuan Kreng as an Environmental Conservation Area has not been concluded yet because inadequate consultation with local communities, leading to low local support for such a designation. While the principle of zoning has been legally proclaimed as a way to integrate protected areas into wider landscape, there is no practical experience available in Thailand in developing Environmental Conservation Area zones for peatlands as complex (in terms of land use matrix and peatland type diversity), such as in Kuan Kreng that would stipulate particular land uses in particular ecosystems of and restrict further ecosystem degradation. Patrolling and conservation capacities of the non-hunting areas and forest administrations remain limited. Engagement of communities in co-management of peatlands has been adhoc, supported primarily by NGO and not expanded onto wider peatland PAs. Since a part of the peat land is under a land reform scheme, whose status remains unsettled, the area is attracting interest to large-scale land developers. While villagers in the Thale Noi area seem in agreement with proposals to enhance protection of the peat swamp, others are concerned that their access to the land would be restricted.

Technologies to avoid peatland degradation not available and major gaps in carbon value knowledge of peatlands. The international research on co-existence of peatlands with economic use areas has demonstrated a need to put in place certain hydrotechnical measures that would separate the plantation from the surrounding landscape and would eliminate or minimize the cycle of draining effects and resulting fires. The expertise and resources of the baseline program run by the Irrigation Department (mentioned in the Baseline sub-section below) is unlikely to be sufficient to take into account the full complexity of the Kuan Kreng ecosystem and design a system that would rewet uniformly all dry peatland areas that are most prone to fires. The current idea promoted by the Irrigation Department is to build two large scale embankments in the Northern and Southern parts of the Thale Noi part of the Kuan Kreng might result in creating two large scale reservoirs along the embankments while leaving the central part dry and still prone to fires. There are a number of technical alternatives which this UNDP-GEF proposes to consider, including supporting the initiative of the Kreng Local Government Organization to considering embankment of smaller patches of natural and semi-natural peatland areas rather than a large scale embankment (Kreng subdistrict has identified at least 5 such areas totaling over 2,300 hectares), or a combination of an embankment around the natural areas, while blocking of smaller drains and ditches in the central parts of the raised bog peat-swamps, and possibly also consideration of a combination of hydrological restoration with subsequent assisted natural regeneration (in areas damaged by storms or fires). Local NGOs have implemented ad hoc restoration projects – these can be effective in a small scale, however, these projects have used no proper research on calibrating water tables with sluices and dykes; in many cases the NGOs have been using sand bags as drain blocks instead of proper solid regulated sluices. The expertise to design and implement solutions of the complexity that Kuan Kreng requires has not been yet available in Thailand.

Further to this, lack of precise data on carbon fluxes from tropical peatlands remains one of the highest international knowledge gaps recognized by the IPCC (conclusion stemming from the process of preparation of the 2013 IPCC Wetlands Supplement). There is very little data on carbon fluxes in tropical peatlands overall and practically NO Thailand-specific data on fluxes from oil palm plantations under various water regimes, nor on primary or secondary peat-swamp forests at raised bogs, nor on fluxes from

other types of peatlands (such as fens under paludiculture). Lack of data has been mentioned as a major obstacle in the IPCC Wetlands Supplement, but it also contributes to inability to provide arguments for decision makers in Government and to communities in Thailand as to why peatlands are important from the global climate change perspective.

Inadequate peat-swamp land-use policies. Being fragile ecosystems due to dependence on water table fluctuations, peat-swamps require clear standards about what uses and in what way can be allowed within such ecosystem's carrying capacity. While, as described further, Thailand has developed National Wetlands Action Plan as its *Ramsar Strategy* (mentioned below), it does not include specific standards and enforcement mechanisms that are critical to ensure sustainable peatland use. For example, the expansion of oil palm plantations – which is the key threat - has been as a result of a vacuum in national policies that would put certain limitations on it from the point of view of its impact on ecosystems. For example, oil palm plantations establishment plans are not required to go through Environmental Impact Assessment. Hence, there is no requirement for oil palm investors to establish buffer zones or embankments to curb the obvious draining encroachment effect described earlier in this document. Similarly, there have been inconsistencies in the policies about community forest management: how community forests be established and managed in a way that they would not pose threat to peat soil degradation have not been clarified nor codified.

Baseline scenario and associated baseline projects

Several baseline programs are addressing the threats and barriers described above, and hence serve as a foundation for this UNDP-GEF project. However, under the business-as-usual scenario they will not be sufficient to afford the full protection of these ecosystems, nor to demonstrate more sustainable management of peat swamp forests. These are briefly described below, alongside with their business-as-usual scenarios.

- Protected Area management: The Ministry of Natural Resources and Environment annually spends about US\$ 44 million dollars on nature conservation activities, yet the total budget for protected areas on peat swamp forests is only a small fraction of this, which is approximately. US\$1.5 M. The budget is allocated primarily to maintain recurrent activities of protected area administrations and partly for equipment renovation. The baseline program also includes the recent activities to declare the Environmental Conservation Area in Kuan-Kreng, but the proposal has been stalled due to the complexity of the ecosystems, complications in the land use claims, and lack of adequate discussion with local communities. Under business-as-usual scenario, the funding available under this baseline program will not be sufficient to expand the protected area estate on peatlands; zoning of Kuan Kreng will not happen and as such no integration of key conservation areas in wider landscape will happen; by conservative estimates, in the next 5 years, this will result in further degradation of over 2,000 hectares of peat-swamp forests in Kuan Kreng due to encroachment and resulting peat mineralization and fires.
- Rewetting to avoid fires by the program of the Irrigation Department of the Ministry of Agriculture on Fire Prevention: In 2013, after a series of large-scale fires in previous year, DNP is in consultation with the Irrigation Department of the Ministry of Agriculture and Agricultural Cooperatives (MOAC) to design a hydrotechnical scheme to raise the water table in Kuan Kreng in order to avoid fires, The budget of this proposed project is being finalized – including the technical design and the area of coverage (currently estimated to cover around 10,00 ha); initial estimation is within the range of USD 1.5 M. This UNDP-GEF supported project will seek to collaborate with this project during the PPG. Under the business-as-usual scenario, the expertise and resources of the program is unlikely to be sufficient to consider the full complexity of the Kuan Kreng ecosystem and design a system that would rewet uniformly all dry peatland areas most prone to fires, as described further in the barriers section earlier. At least 30% of the target areas is assessed to still be at risk of fire if the baseline project is implemented without GEF support. Based on historical dynamics in peatland loss in Thailand, most of these areas, but conservatively at least 25% of the remaining natural and secondary wet peat swamp areas in Kuan Kreng, are going to be lost to drainage and fires in the next 6 years. With this UNDP-GEF project support, international expertise would be available to Thailand specialists in designing a truly effective rewetting plan that would stop peat oxidization and help avoid fires.
- The local sustainable development programs implemented by local government units (*Tambon Administrative Offices, TAOs*) include support to conservation camps for local youths, supporting establishment of community volunteer groups for wildfires prevention, establishment of small areas for fish conservation, establishment of community forests and awareness on natural conservation through local curriculum in schools, and other programs aimed at awareness raising. In the next 5-6 years, an estimated USD 1.5 mln is estimated to be invested in these programs. Under business-as-usual scenario, the awareness raising activities alone will not be sufficient to address the technological barriers in restoration and sustainable use of peatlands, and hardly any new community forests are likely to be established. These programs also would not be able to influence policies for peatland use and conservation at the national level.

Proposed alternative scenario, with a brief description of expected outcomes and components of the project, incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing

The long-term solution sought is to change the trajectory of the baseline approaches in order to facilitate a transformative shift from unsustainable to a sustainable and integrated use of peat-swamp forests in Thailand. The project strategy is to address the three barriers described through a incremental outcomes organized into three components: the first one focusing on improving the protection status of remaining natural peat-swamp forests in the second-largest peat-swamp landscape of Thailand; the second one helping to implement innovative approaches to avoid degradation and restore peat-swamps; and the third component helping to

improve peat-swamp use policies. In doing so it will influence the production practices employed by local economic actors and will support measures to avoid GHG emissions from peat degradation and fires, and demonstrate approaches to increase sequestration through afforestation. This would result in global benefits in the climate change, biodiversity and SFM focal areas, both in the short and long term, as further described in the Global Benefits sub-section table later in this document.

Under the first component focusing on protection, the GEF project scenario will lead to the establishment of a new Environmental Conservation Area in Kuan Kreng peatland landscape. Through this, the project will expand the protected area estate of Thailand to include approximately 13,000 ha of previously unprotected natural primary or secondary peat-swamp forest and non-forested peatland ecosystems (raised bogs) of high conservation and carbon value. The regime of the economic activities in areas surrounding these high conservation and carbon value sites will be revised to exclude such activities that might cause ecosystem degradation, such as large-scale unregulated drainage, oil palm plantations, and any expedient burning activities. This will be reflected in the new zoning arrangement within the Environmental Conservation Area. The zoning will be carefully planned and discussed in collaboration between the local communities (and local Government organizations), the non-hunting area administrations, Office of Natural Resources and Environmental Policy and Planning (ONEP), forest administrations, Irrigation Department and other relevant branches of the Ministry of Agriculture and Agricultural Cooperatives. The total area of the Environmental Conservation Area, with all zones included, is expected to be about 128,000 ha, including water bodies such as two small lakes. A management plan for each zone will be put in place, as well as ground-water table standards that would need to be maintained in each zone reconciling the ecosystem stability requirements on the one hand and local community use needs on the other hand. A Co-management Committee for the ECA will be set up representing all conservation and land use stakeholders to make decisions about land use and conservation activities, patrolling, monitoring and enforcing of the zoning arrangements. Patrolling and conservation capacities of the ECA administration will be strengthened. Community forests will be set up at approximately 2,000 ha of high-conservation value peat-swamp forests: within these forests, communities will be allowed and supported in collection of kra-jood grass, fishing, water buffalo grazing, and other sustainable livelihood activities provided they adhere to land use standards so that the hydrological regime in the peatlands, the vegetation cover and biodiversity remain intact or regenerate within their natural regeneration capacities⁸. The baseline program on protected areas, described above, will contribute 1.2 mln USD for the feasibility studies and regular PA staff support. In addition, the project will also work to raise awareness of potential investors on the conservation status of the area and associated regulations, as well as to raise their awareness on the importance of the peatlands, such as through the local Chamber of Commerce, in order to minimize the risks from big investors in landuse conversion in this area.

Using best local and international expertise, the project will, under the second component, design and implement hydrotechnical measures to prevent the encroachment of the draining effect and fires on primary and secondary natural peat-swamp forest at approximately 2,300 ha in Kreng sub-district and at least 2,000 hectares elsewhere within Kuan Kreng peatland landscape. This will be achieved primarily through construction of an embankment around the targeted natural and semi-natural swamp forests, in combination with activities aiming at blocking of drains and ditches where necessary and putting in place regulated sluices to enable the water table regulation within the target sites⁹. The project will design the hydrological rehabilitation plans with the aim to maintain and establish permanently wet conditions in the target areas (which is in line with the natural ecosystem requirements of peat-swamp bogs), which will help to stop peat oxidization and fires. The plans will be designed upon careful study of the area peat accumulation history and peat depth mapping, hydrology, topography, vegetation and precipitation regimes, engaging local Government engineers, Irrigation Department of Ministry of Agriculture, Ministry of Natural Resources and Environment, and international experts. In addition to the hydrological restoration, approximately 300 ha of forest that has degraded in the past due to fires, will be regenerated through planting of native species. The baseline programs on water table regulation aiming at fire prevention are going to provide major co-financing (4,100,000 USD) for hardware and infrastructure costs under this component.

The project will set up a peat-swamp carbon monitoring system. It will help to clarify and communicate to scientists, public and politicians the true value of peatlands, the cost of degradation and carbon market opportunities related to peatland conservation and rehabilitation. The monitoring system will rely on the methodologies that are currently being developed under the IPCC 2013 Wetlands Supplement. In order to fill the international and local gap in the knowledge on the carbon fluxes in the tropical peat-swamp forests and reduce the current high fluctuation in the expert assessment on some of the coefficients, the project will facilitate establishment of 3-4 site-based carbon measurement (subsidence, cameral measurements of CH₄, measurements of dissolved organic carbon, possibly test application of the “vegetation proxy” method) stations to measure carbon fluxes (CO₂, N₂O and CH₄) at degraded drained soil (oil palm and rubber tree plantations), secondary wet peat-swamp forests, fire-degraded forests, and other sub-types of land-uses as necessary. In addition to the Kuan Kreng landscape, the carbon monitoring system will also

⁸ The activity on sustainable livelihoods has been proposed tentatively on the assumption of local and central Governments’ opinion, supported by UNDP country office experience, that such a scheme would be feasible. This is, however, subject to a detailed feasibility study at the PPG stage, which would clarify the financial mechanism, the co-financing, lending and return terms, hosting agency, success monitoring protocols and processes.

⁹ The methodology for this activity has been discussed with local hydrotechnical engineers at Kreng sub-district and was found appropriate, pending a more detailed elaboration during the PPG stage. The methodology is also known internationally, as it has been applied for temperate peatlands; for case of its application in temperate peatlands of the same type (raised bogs) in Belarus, the reference is to Section 4 of this [UNDP-GEF Belarus Guidebook on Peatland Rehabilitation](#). As a result of this proposed project in Thailand, a similar guideline will be developed for tropical peat lands, which could be applied in Thailand and neighbouring countries.

cover the Kunthulee Peat Swamp - in the adjacent province, where most of the areas are still primary peat-lands, to provide comparative data. .

Under the third component, the project scenario will address the policy gap in the conservation and use of peatlands. The inventory of peatlands will be carried out enabling precise knowledge of the amount of peatlands in Thailand, their status, land uses, biodiversity and carbon values. The national strategy and action plan on peatlands will consolidate roles and responsibilities of various institutions managing and conserving peatlands and streamline them. The policy will establish standards on peat land use, such as standards to ensure buffers between economic and natural peatlands, standards for avoidance of encroachment, standards for hydrological rehabilitation, operation of community forests at peat-swamps, regulation of water table in the peat-swamps to avoid oxidization and fires. The strategy will define how many peatland areas and where would need to be set aside as protected areas, where and how peatlands would need to be rehabilitated, and how peatlands could be managed sustainably in economic landscapes.

Global environmental benefits

Prevention of degradation at the 4,300 ha targeted by Component II of the project will ensure non-depletion of the carbon pool contained in these peatlands, conservatively estimated to amount to 24 M tC. Under the baseline scenario, based on historical records of peatland drainage in Thailand, at least 25% of the target areas ($25\% \times 4,300 \text{ ha} = 1,075 \text{ ha}$) will be lost to drainage primarily for oil palm plantations. Peat oxidization will happen at a rate of $40.33 \text{ tCO}_2\text{-eq/ha/y}$ ¹⁰. Emissions from oxidization (20 years perspective in line with GEF SFM tracking tool and Voluntary Carbon Market standards for peatland projects) under baseline will equal to $1,075 \text{ ha} \times 44.33 \text{ tCO}_2\text{-eq/ha/y} \times 20 \text{ years} = 953,095 \text{ tCO}_2\text{-eq}$. In addition, based on fire statistics on drained oil palm plantation at least 17% of the area (731 ha) would be burned in a wild fire in the next 20 years. Emissions from fires are projected to be $731 \text{ ha} \times 747.11 \text{ tCO}_2\text{/ha}$ ¹¹ = $546,137 \text{ tCO}_2\text{-eq}$. The total CO₂-eq emissions avoided by the project scenario, therefore, will amount to $1,499,232 \text{ tCO}_2\text{-eq}$, conservatively¹². The hydrological measures sought to be put in place for prevention of emissions under Component II, do not represent “re-wetting” as defined by IPCC 2013 Wetlands Supplement in draft, and therefore emissions of CH₄ are not going to change significantly between baseline and project scenario (subject to confirmation at PPG stage based on exact parameters of the water table to be set and maintained). The sequestration dividend from planting of 300 ha of native forest species has been calculated based on the IPCC AFOLU Guidance (tropical moist deciduous forest in Asia; soil and litter pools ignored for conservatism; subject to precise calculations at PPG): Table 4.10 Above-ground net biomass growth in tropical and subtropical forest plantations is 8 tonnes of dry matter per ha per year. The above-ground to below-ground ratio is assumed to be 0.20 (IPCC Table 4.4); carbon fraction of above-ground forest biomass is 0.47 (IPCC Table 4.3). Total carbon dividend from afforestation: $8 \text{ t.d.m} \times 0.47 + 8 \times 0.2 \times 0.47 = 3.76 + 0.752 = 4.512 \text{ tC/ha/y} = 4.512 \times 44/12 = 16.54 \text{ tCO}_2\text{-eq/ha/y}$. For 300 ha in a 20 year perspective this equates to $59,558 \text{ tCO}_2\text{-eq}$. From the climate change mitigation cost-effectiveness perspective, the total investment in the project’s Component II (investments leading to direct life time emissions avoided or carbon sequestered) of US\$7,292,214 (GEF plus co-financing) will conservatively generate total carbon benefits (emissions avoided plus carbon sequestered) amounting to $1,558,790 \text{ tCO}_2\text{-eq}$ over a 20-year time horizon. The unit cost of mitigation is therefore US\$4.68/tCO₂, which is far below the cost of most of the presently known climate change mitigation approaches. At the stage of CEO endorsement more detailed tCO₂e estimates in line with IPCC Tier 2 level will be presented, including separate estimations for protection of peat swamps, rewetting, prevention of fires and reforestation and comparison with appropriate baseline scenarios.

From the biodiversity perspective, the project will enlarge the presence of under-represented raised bog peatland ecosystems in the national PA system, enlarging the overall presence of peatlands in the PA estate by 62% percent. The project permanently removes threats of habitat degradation stemming from economic encroachment and fires, and ensure protection of key raised bog species including the Fishing Cat *Prionailurus viverrinus*, Smooth-coated Otter *Lutrogale perspicillata*, Striped New Guinea Softshell Turtle *Pelochelys bibroni*, Southeast Asian Box Turtle *Cuora amboinensis*, Giant Asian Pond Turtle *Heosemys grandis*, Sunburst Turtle *Heosemys spinosa*, Malayan Snail-eating Turtle *Malayemys subtrijuga* and Black Marsh Turtle *Siebenrockiella crassicolis*.

The project’s target areas are forests, and the approach is such that while delivering climate and biodiversity benefits, it also creates incentives for communities for sustainable use of forests. Namely, the project scenario supports establishment of community forests at 5,000 ha, with specific regimes of forest use, allowing harvesting of trees, kra-joog grass and NTFR in a way which does not disrupt the hydrology or vegetation cover of the peat-swamp forests. It thus creates income streams form sustainable use of peat-swamp forests while putting a close to activities that lead to peat-swamp forest degradation (e.g. large-scale oil-palm plantations). Under the second component, the project delivers knowledge on the carbon and biodiversity values of peat-swamp forests that will be used by decision makers in advocating for replication of the project approach beyond the target sites and beyond Thailand.

¹⁰ IPCC 2013 Wetlands Supplement in draft: $11 \text{ tCO}_2\text{-C/ha/y}$ is conservatively emitted from drained tropical oil palm plantations: for CO₂: = $11 \times 44/12 = 40.33 \text{ tCO}_2\text{-eq/ha/y}$.

¹¹ Source of coefficient is IPCC 2013 Wetlands Supplement in draft.

¹² A more precise calculation will be carried out at the PPG stage.

Innovativeness, sustainability and potential for scaling up

The project demonstrates many approaches for the first time in Thailand, including zoning for ecologically complex peat-swamp landscapes, hydrotechnical engineering to prevent drainage effect from oil palm encroachment and fires, and carbon monitoring. While this is a relatively small investment, its replication potential goes far beyond the target areas. The second component of the project includes a tropical peatland carbon flux monitoring system. While the system is going to be implemented at the project target sites but would also be applicable in similar ecosystems in Thailand and neighboring countries. By now, data on emissions of GHG, and especially CH₄, from drained or rewetted tropical peatlands has been extremely scarce at the international level. IPCC has encouraged more site-based pilot projects that would enable precise assessment of GHG fluxes in these ecosystems. The peatlands in Thailand are similar to those in Indonesia, Malaysia and other Southeast Asian countries and this project would therefore create valuable input to the IPCC Wetlands Supplement discussions. It will also enable more precise planning of peat-swamp conservation and restoration projects, focusing on carbon mitigation, in tropical and subtropical regions.

With respect to embedding project results in-country, the very nature of the third component is about strengthening law, policies and standards that would curb encroachment, define accurate ways to regulate water tables in peat-swamps so as to achieve ecosystem sustainability and avoid fires. The national strategy and action plan on peatlands, to be developed under the third component, will streamline the institutional context of peat-swamp management in the country and will define management regimes for different peatland areas so that ecosystem resilience is retained in the long-term.

A.2 Stakeholders

STAKEHOLDER	RELEVANT ROLES
MONRE- ONEP	ONEP will be a key Implementing Partner of this project through its Biodiversity and Climate Change Coordination Offices. ONEP is the focal point for UNFCCC and CBD. It is responsible for the Environmental Conservation Area (ECA). It will link the project to other divisions and offices within the MoNRE and among other line ministries. It will play an important role in reaching out to local communities and, in coordination with Irrigation Department and forest administrations.
MONRE-DNP	DNP is responsible for the Non-Hunting Areas and will be engaged in the first component Department of Nature Protection will be engaged in the first component on the establishment of the ECA and zoning.
MONRE-RFD	RFD (Royal Forestry Department) is responsible for the National Reserve Forest Areas, which constitute a large part of Kuan Kreng Peat Swamps. It will be engaged particularly in the outcomes with regards to zoning and sustainable utilisation including the establishment of community peat swamps forests.
Ministry of Interior	Ministry of Interior's Department of Local Administration Office is for ensuring the implementation of local initiatives (such as community forests and local hydrotechnical constructions) and therefore is an important partner for all three components of the project.
Local government organizations (TAOs) and local communities which they represent	Three TAOs in the demonstration areas will be focal points for local peat-swamp management at various intervention including policy & planning, capacity building, local collaboration and partnership, etc. The local government units (TAOs) are responsible for local sustainable development. They also coordinate actions of different agencies and facilitate the resolution of land-use conflicts; they will need to be involved in the process of development of new protected areas; and oversee and allocate budgets that communities may access for funding livelihood projects and other development work. TAOs will be involved throughout the establishment of the ECA, but also to design and implement hydrotechnical facilities to prevent degradation of natural and secondary peat-swamp forests, proposed under Component 2. They are primary beneficiaries also of those project activities which deal with community forest management.
The Prince Songkhla University	The Prince Songkhla University in Songkhla Province will provide technical assistance and capacity building to local stakeholder groups located in the three demo sites and could be involved in the carbon fluxes studies
Irrigation Department of Ministry of Agriculture	The role of the Irrigation Department, which is in charge of planning hydrotechnical projects for fire prevention in peat-swamps, is important, as they provide the baseline for the second project component and they will be key partner for it.

A more detailed stakeholder engagement plan (including full engagement of communities and gender aspects) will be developed at the PPG stage.

A.3 Risks

Risks	Level	Mitigation
Competing agency interests for peatlands bar the approval of National Peatland	M	Indeed, in Thailand, peatlands fall under different categories of land use: forest administrations, protected area departments, Irrigation Department, local Government organizations each have their roles or claims for use or conservation of peatlands. Some stakeholders lean toward continued consideration of peatlands as wastelands, while others may favour a complete hands-off

Risks	Level	Mitigation
Strategy and Action Plan		protection of high ecological values of peatlands. As a mitigation to this, under Component III, as a first step towards consensus-building for the National Strategy and Action Plan, the project is going to create the even ground for decision making open for all stakeholders, doing so by elaborating detailed stocktaking of peatlands, clearly defining their values and proposing scenarios for each key block of peatlands - ultimately aiming at retaining maximum ecological resilience of the ecosystems, and hence – their maximum productivity in the long-term which should be in the interest of the country. the formulation of the National Strategy will be based on inter-disciplinary studies that will feed into the Strategy and multiple stakeholder consultations (at central and local levels) before the Strategy is proposed for ultimate approval.
Local land-use conflicts hamper the efforts to ensure protection of natural peat-swamps in Kuan Kreng	M	Land tenure at Kuan Kreng is complex issue. The landscape includes many small patches where formal land-use title has not been established. The project here relies on the Government efforts which have recently started consider each case of unsettled land use rights and solve them. The work on the zoning and land-use planning under the second component of this GEF project will be instrumental in providing arguments for both sides and mediating in such a way that regardless of the land title the land use regime as established is going to be economically attractive to the user while staying with the ecosystem carrying capacity. The expected timeline of the Government for land use claim settlements in Kuan Kreng seems to be in synchrony with the tentative GEF cycle expected for this project.
Climate change impact and consequences	L	Thailand is prone to climate change impacts and disaster consequences, such as floods and storms. The South of Thailand where Kuan Kreng is located has been assessed as low risk at this stage. Whether climate change will bring increased rains and storms or droughts to southern Thailand, the restoration of the peat swamp area can be expected to provide significant adaptation co-benefits to local communities and biodiversity. It will offer a stable water supply, reducing the occurrence and impacts of floods and droughts at the same time, and by extension reducing the vulnerability of the agricultural, water, health and disaster management sectors. These values will be assessed, discussed with communities, and integrated in the National Strategy and Action Plan under Component III of the project.

A.4 Coordination

The project will ensure coordination with the GEF project “Integrated community-based forest and catchment management through an ecosystem service approach (CBFCM)”. This project’s work on bio carbon assessment methodology from ecosystems and promotion of PES related to bio carbon and other ecosystem services; the peatlands project, if approved, is going to generate data that would strengthen the case for PES application in Thailand. This project will also benefit from the results and experience of another GEF project “Catalyzing sustainability of Thailand’s Protected Area System”; the mechanisms for community involvement and sustainable financing options put in place by this project will be considered when designing community forest scheme under Component I. Furthermore, the experience of that GEF project will be used for building the capacities of the ECA at Kuang Kreng. Since these two projects are also under implementation by MONRE, the Ministry will ensure coordination and lessons sharing as well as working level contacts between the implementation teams working on these projects. Outside of GEF, the project will ensure strong cooperation with the Pak Panang River Basin Project initiated by His Majesty the King of Thailand to support local environmental management and local livelihoods. That project has supported a number of local actions to maintain water level in the fen peat lands in the northern part of the country through construction of small-scale infrastructure, amongst other things and also seasonal flood management. These aspects will be carefully considered in the design of the hydrotechnical facilities proposed by this project under Component II. This project will also establish contacts and information exchange with the IFAD-GEF regional project “Rehabilitation and Sustainable Use of Peat land Forests in South-East Asia”, that is operational in Malaysia, Indonesia, Philippines, Vietnam, Singapore, and Brunei.

The project development and implementation will also be built on ongoing work and lessons from the GEF-ADB Greater Mekong Subregion Forests and Biodiversity Program. As this project is working “to increase investments and improve the management and climate resilience of high priority forest biodiversity conservation landscapes including protected area systems of the Greater Mekong Subregion (GMS), recognizing the pressures on these landscapes from development and climate change” in several Greater Mekong countries, including Thailand, its work on carbon accounting systems and protocols, information sharing on good practice for forest carbon management and finance and sustainable PA, forest and watershed management will be directly relevant to this proposed project.

DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under relevant conventions

This project is in line with Thailand’s *Strategic Plan on Climate Change (SPCC 2008-2012)*. Component II of the project pilots

technologies for GHG mitigation which speaks to SPSS Strategy I (Protect, conserve and add values to natural resource base, and protect, conserve and improve environmental quality and the quality of living from climate change impacts; promote activities such as water and forest conservation and restoration, infrastructure improvement and land use change to reduce vulnerabilities in hot spot areas), and Strategy 2 (Promote greenhouse gas mitigation activities based on sustainable development which focuses on increased carbon sinks; and sustainable forest conservation, afforestation and reforestation to increase carbon sinks). The project tackles some of the key barriers mentioned in the SPCC, namely lack of scientific knowledge base on climate change to support policy formulation and evaluation, and decision making; lack of public awareness; lack of capacity among relevant agencies; and lack of clear direction and continuity towards international cooperation. The role of ecosystems in carbon storage in Thailand has been also noted in Thailand's *Second National Communications (2010)*, which noted the importance of the forestry as a win-win policy in Thailand for GHG emission reduction and for other ecosystem services and hence the need to promote such an approach in the country.

Thailand's National Report on the Implementation of Convention on Biological Diversity (2009) has noted the diversity of peat land ecosystems in Thailand, including those in the lowlands of Southern Thailand. Thailand has designated 11 peat lands as Ramsar sites, while the National Biodiversity Strategy and Action Plan has a goal to have at least 35% of wetland areas (most of which are peat swamps) "restored and conserved". The current percent is 30, but almost no presence of raised peat bog ecosystems in it. With enlargement of the peatland coverage in the PA system by 65% and specifically including 13,000 ha of raised bog peatlands in the PA estate, this project contributes in a significant manner to Thailand reaching this national PA targets for peatlands. The project will also directly support the achievement of Aichi Target's Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use; particularly Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced; and Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services – particularly Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including prevention of degradation of natural ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

The importance of peat lands as wetlands are also being recognized in Thailand. In this aspect, this project will also support the implementation of Thailand's Action Plan (2009 – 2014) for Wetland Conservation which focuses on five goals regarding the utilization of wetland; wetlands with significant international importance; international cooperation; institutional performance and efficiency; and a full membership of the Ramsar Convention by 2014. A Cabinet Resolution from a meeting on November 3, 2009 approved several measures for wetlands conservation, including the principles of protection of ecosystem services and rehabilitation of degraded wetlands. By developing a new National Strategy and Action Plan for peatlands (Component III) this project will extend the current Thailand Action Plan and compliment it with missing conservation standards and inventories.

B.2 GEF focal area and/or fund(s) strategies, eligibility criteria and priorities

The project will generate multiple global environmental benefits by demonstrating improved conservation and sustainable management of peat-swamps and strengthening national policies governing peatland management of all types (including *inter alia* peat-swamp forests). Under the climate change focal area, the project will generate benefits by avoiding degradation of peatlands and restoration of peat-swamp forests. This will result in GHG emission avoided and carbon sequestered as presented in the Global environmental benefits sub-section above. These project objectives are line with the expected outcomes of GEF CC SO-5 (*Restoration and enhancement of carbon stocks in forests and non-forest lands, including peatlands*).

The project generates benefits under the biodiversity focal area insofar as it will improve the conservation status and management effectiveness of existing peat-swamp non-hunting areas in Kreng sub-district and establishing 13,000 ha of protected sites within the Environmental Conservation Area that will help increase the representation of raised bog peat-swamps in the national protected area estate. This will be accompanied by creation of sustainable use zones around key conservation sites, which will supplement the protected areas helping to integrate them in wider landscape. This approach is line with GEF BD-1 (*Improving management of existing PAs and expanding protection of under-represented ecosystems within the PA system*).

Over 60% of the targeted landscape is forested. Under the GEF's Sustainable Forest Management focal area, the project will develop a model for the sustainable management of peatland swamp forests as "community forests" and provide incentives to communities to use peat-swamp forest ecosystems in wet state, without draining them. In addition, under the second component, the project is setting up a carbon monitoring system which addresses multiple international and local gaps in understanding the true value of peat-swamp forests.

B.3 The GEF Agency's comparative advantage for implementing this project

UNDP has accumulated years of experience in managing peatland projects. UNDP has focused on policy-making, capacity building, hands-on research, and piloting and adapting management measures to conserve, restore, and sustainably manage peatlands, particularly in South-East Asia and Europe. In Asia, UNDP has worked on peatlands in Malaysia through the GEF-supported UNDP project "Conservation and Sustainable use of Tropical Peat Swamp Forest and Associated Wetland Ecosystems. UNDP is also working under the UN-REDD program to improve the management of peatlands in neighboring Indonesia. In Europe, UNDP has managed peatland projects in a number of countries. This includes the aforementioned peatland management

projects in Belarus. UNDP is also implementing a German funded peatland restoration project, in partnership with RSPB, in Belarus, and EC-funded projects on peatlands in Russia, Ukraine and Belarus. A GEF project in Bosnia and Herzegovina focuses on conservation of unique karst peatlands. UNDP has been implementing an innovative project on restoration and protection of permafrost and steppe peatlands in Russia. Wetland conservation projects in Lithuania and Ukraine promote protection and sustainable management of peatlands. In addition, a number of UNDP-GEF small-grant projects in South East Asia and Europe working with local communities to engineer the wise use of peatlands. Final evaluations for the Belarus and Lithuania projects rated both as highly satisfactory, in terms of addressing their stated objectives and generating global benefits.

With respect to SFM, UNDP is central to implementation of the UN-REDD program. UNDP is working in 29 countries around the world on SFM and REDD+, focusing on forest governance frameworks, planning, and monitoring. In Europe and CIS, UNDP is supporting over 60 ecosystem projects worth USD 107 million. These include sustainable forest management in a number of ecoregions, including the large areas in South East Asia, LAC and Europe. UNDP is the implementing agency for forest carbon projects in Russia and Kazakhstan funded by the German International Climate Initiative (USD 11 million), which is testing innovative carbon mitigation techniques within protected areas. UNDP was the first agency to develop a Guidebook for countries on how to develop and implement Low Emission Development Strategies and NAMAs, including for the forestry sector.

The proposed project is in line with the UNPAF framework (2012-2016) for Thailand and UNDP Thailand's Country Program Document (2012-2016), namely its Pillar 1 *Low Emission and Climate Resilient Society Initiatives*. UNDP has a network of Regional Technical Advisors, with experience in peatland conservation and management, which will be made available to this project. At the country level, the UNDP Thailand country office has sufficient staff who can effectively provide supervision to the project staff who will be recruited to implement the project at a later stage.

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)
Mr. Chote Trachu	Permanent Secretary	MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT	APRIL 2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adrian Dinu, Officer-in-Charge and Deputy Executive Coordinator, UNDP - GEF		April 12, 2013	Sameer Karki (EBD)	+662-3049100 Ext.2729	sameer.karki@undp.org