# REQUEST FOR CEO ENDORSEMENT/APPROVAL

**PROJECT TYPE: Full-sized Project**
**THE GEF TRUST FUND**

**Submission Date:** December 22, 2011
**Resubmission Date: Feb 14, 2012;**
**June 29, 2012; August 17, 2012.**

## PART I: PROJECT INFORMATION

**GEFSEC PROJECT ID:** 3435
**GEF AGENCY PROJECT ID:** ID 3435
**COUNTRY(IES):** Indonesia (INO)
**PROJECT TITLE:** Sustainable Forest and Biodiversity Management in Borneo
**GEF AGENCY(IES):** Asian Development Bank
**OTHER EXECUTING PARTNER(S):**
**GEF FOCAL AREA(S):** Multi-focal areas
**GEF-4 STRATEGIC PROGRAM(S)**: SFM-SP1; SFM-SP2; SFM/LD/TFA-SP2.
**NAME OF PARENT PROGRAM/UMBRELLA PROJECT: NONE**

| **Expected Calendar** (mm/dd/yy) | |
|---|---|
| **Milestones** | **Dates** |
| Work Program (for FSPs only) | June 2009 |
| Agency Approval date | Sept 2012 |
| Implementation Start | Jan 2013 |
| Mid-term Evaluation | Nov 2014 |
| Project Closing Date | Jan 2016 |

### A. PROJECT FRAMEWORK

**Project Objective**: To ensure the sustainable management of forest resources and biodiversity in the Indonesian Heart of Borneo (HOB) by strengthening the capacity of the GOI, developing sustainable livelihood opportunities with local communities, and establishing sustainable financing schemes.

| **Project Components** | Investment, TA, or STA[2] | **Expected Outcomes** | **Expected Outputs** | **GEF Financing[1]** | | **Co-Financing[1]** | | **Total ($)** |
|---|---|---|---|---|---|---|---|---|
| | | | | ($) a | % | ($) b | % | c=a+ b |
| **1. Strengthening policies and institutions for sustainable forest and biodiversity management** | TA | Policies and institutions for sustainable forest and biodiversity management strengthened. | 1.1. Draft national policy and institutional reform agenda for forest resources and biodiversity management and sustainable finance..<br><br>1.2 At least one tri-country roundtable dialogue among Brunei Darussalam, Malaysia, and Indonesia held each year from 2013–2015.<br><br>1.3 Mechanisms and practical procedures supporting eco-regional cooperation implemented. | 475,095 | 27.49 | 1,253,320 | 72.51 | 1,728,415 |
| | Inv | Improved management effectiveness of Kayan Mentarang National Park (1.36 million ha under improved operational manage-ment).<br><br>Increase in | 1.4 Implement foundational measures of the Kayan Mentarang National Park Management Plan, including:<br>• Participatory delineation and marking on the ground of ca. 720 km of park boundary<br>• Establishment of ca. 1,000 ha conservation village models (*cum* REDD+ pilot areas) as part of protection forest and PA co-management | 834,750 | 38.83 | 1,314,957.50 | 61.17 | 2,149,707.50 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | habitat quality for flagship species in Kayan Mentarang National Park (6% increase in effective habitat area)<br><br>Strengthened local community PA enforcement systems. | strengthening. (Linked to JFPR, see Comp. 4)<br>• IEC advocacy on PA protection, sustainable use and management (e.g., produce one video presentation on park management and reproduce 1,000 copies for distribution to local government units and schools; conducted 30 awareness raising meetings; and install 30 information billboards)<br>1.5 Four joint-agency/community participatory patrol units established in the four districts (one each per district). | | | | | |
| **2. Management of Land Use, Land Use Change, and Forestry** | TA/ Investment | Land use and forestry practices improved<br><br>GHG emissions from forest lands reduced by 62,674 tCO2e over 10 years.<br><br>Illegal logging rates reduced | 2.1 Design of four REDD+ demonstration sites covering 2000 ha; two of which will be further up-scaled through FIP – see Output 3.3. | - | - | 1,279,220.46 | 100 | 1,279,220.46 |
| **3. Sustainable Financing Mechanisms** | TA/ Investment | Sustainable financing mechanisms developed.<br><br>An est. 5% increase in income of local project cooperators (environmental services providers), where at least 30% of which are women.<br><br>Financial resource mobilization to upscale REDD+ in West Kalimantan | 3.1. Four PES schemes designed; with two PES pilots implemented and supported by PES M&E --linked to JFPR sustainable livelihoods project, see Component 4.<br><br>3.2. One operational guideline/manual for the application of PES financing mechanisms formulated.<br><br>3.3. Forest Investment Program resources of $17 million mobilized for additional community-focused investments to address deforestation and forest degradation in West Kalimantan. | 1,024,090.20 | 73.16 | 375,620.88 | 26.84 | 1,399,711.08 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **4. Sustainable Livelihood Systems for Indigenous Peoples**<br><br>*(funded by the Japan Fund for Poverty Reduction, JFPR)* | TA | Improved livelihood practices for ca. 1,898 Dayak beneficiary households in project sites established.<br><br>Income of pilot households increased by 10%.<br><br>30% of mothers in project site using introduced health and santiation practices. | 4.1 Enhanced village-level regulations and enforcement system for forest protection.<br><br>4.2 Livelihood skills and support system interventions piloted in 13 villages including<br>• participatory baseline survey on livelihood systems and supply chains;<br>• participatory village planning;<br>• establishing and piloting PES mechanisms and capacity, including benefit sharing mechanisms (linked to output 3.1 and 3.2);<br>• trainng and capacity support for alterntive livelihoods;<br>• information dissemination and outreach.<br><br>4.3 Support for application of knowledge on improved nutrition and sanitation in 13 villages. | - | - | 1,026,408 | 100 | 1,026,408 |
| **5. Project Management** | TA/ | Effective project management established | 5.1 MRV system developed for HOB Indonesia and coordinated at the tri-national level<br><br>5.2 Two knowledge and lessons (REDD+ and PES schemes) captured and disseminated through national, regional and global knowledge networks.<br><br>5.3 Timely implementation and disbursement of project activities and funds, respectively. | 193,337.80 | 13.87 | 1,200,473.16 | 86.13 | 1,393,810.96 |
| **Total Project Costs** | | | | 2,527,273 | 28.15 | 6,450,000 | 71.85 | 8,977,273 |

PA=Protected Area, IEC = information, education, and communication, MRV = monitoring, reporting, and verification, PES = payment for ecosystem services, REDD+ = reducing emissions from deforestation and forest degradation and carbon stock enhancement.

[1] List the $ by project components. The percentage is the share of GEF and Co-financing respectively of the total amount for the component.

[2] TA = Technical Assistance; STA = Scientific & Technical Analysis.

**B. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT**

| *Name of Co-financier (source)* | *Classification* | *Type* | *Project* | *%* * |
|---|---|---|---|---|
| Government of Indonesia | Exec. Agency | In-kind | 500,000 | 7.75 |
| Asian Development Bank[1] | Impl. Agency | Grant | 3,950,000 | 61.24 |
| WWF | NGO | Grant | 2,000,000 | 31.01 |
| **Total Co-financing** | | | 6,450,000 | 100.00 |

Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

**[1]- RCIF (US$ 700,000); CCF (US$ 1,250,000); JFPR ($US 2M).**

**C. FINANCING PLAN SUMMARY FOR THE PROJECT ($)**

| | *Project Preparation a* | *Project b* | *Total c = a + b* | *Agency Fee* | *For comparison: GEF and Co-financing at PIF* |
|---|---|---|---|---|---|
| GEF financing | 0 | 2,527,273 | 2,527,273 | 252,727 | 2,780,000 |
| Co-financing | 210,000 | 6,450,000 | 6,660,000 | | 10,000,000 |
| **Total** | 210,000 | 8,977,273 | 9,187,273 | 252,727 | 12,780,000 |

**D. GEF RESOURCES REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)[1]**

| *GEF Agency* | *Focal Area* | *Country Name/ Global* | *(in $)* | | |
|---|---|---|---|---|---|
| | | | *Project (a)* | *Agency Fee ( b)[2]* | *Total c=a+b* |
| ADB | Biodiversity | Indonesia | 1,668,000 | 166,800 | 1,834,800 |
| ADB | LD – SFM/TFA | Global/Indonesia | 860,000 | 86,000 | 946,000 |
| **Total GEF Resources** | | | 2,528,000* | 252,800 | 2,780,800 |

[1] No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.
[2] Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.
* The final amount of $2,527,273 is the actual amount approved by the GEF CEO that is reflected in the project financing.

**E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

| *Component* | *Estimated person months* | *GEF amount ($)* | *Co-financing** ($)* | *Project total ($)* |
|---|---|---|---|---|
| Local consultants* | 455.75 | 102,000 | 744,960 | 846,960 |
| International consultants* | 36 | 218,000 | 566,800 | 766,800 |
| **Total** | **491.75** | **320,000** | **1,311,760** | **1,613,760** |

*Total GEF Person months for Technical International Consultants is **10** while **26 person months** is co-financed. For Technical Local Consultants **17 person months** is funded by GEF while 432.75 is co-financed .Details to be provided in Annex C.

** Includes funding for consultants from the ADB CDTA on Sustainable Forest and Biodiversity Management in Borneo (funded by ADB) and the ADB CDTA on Sustainable Livelihoods Systems for Indigenous Peoples in the Indonesian Heart of Borneo (funded by the Japan Fund for Poverty Reduction and administered by ADB).

***Figures includes remuneration and perdiems for international and national consultants.

**F. PROJECT MANAGEMENT BUDGET/COST**

| *Cost Items* | *Total Estimated person months* | *GEF amount ($)* | *Co-financing** ($)* | *Project total ($)* |
|---|---|---|---|---|
| Local consultants* | 45.25 | 90,000 | 181,420 | 271,420 |
| International consultants* | 3 | 65,400 | | 65,400 |
| Office facilities, equipment, vehicles and communications* | | | 350,108.62 | 350,108.62 |
| Travel* | | 24,000 | 120,000 | 144,000 |
| Others*** | | 13,937.80 | 548,944.54 | 562,882.34 |
| **Total** | **48.25** | **193,337.80** | **1,200,473.16** | **1,393,810.96** |

* Figures for Local and International Consultants includes remuneration costs and perdiems/ cost for living allowance. Total GEF Person months for Local Consultants is **15** while **30.25 person months** is co-financed. For International Consultants **3 person months** is fully funded by GEF. Details to be provided in Annex C.

** Includes funding for consultants from the ADB CDTA on Sustainable Forest and Biodiversity Management in Borneo (funded by ADB) and the ADB CDTA on Sustainable Livelihoods Systems for Indigenous Peoples in the Indonesian Heart of Borneo (funded by the Japan Fund for Poverty Reduction and administered by ADB).

*** "Other expenses" include those set aside for project management office and project implementation unit (local level) operations, audits, baseline and endline surveys; report preparations, grant management and contingencies, etc.

**G. Does the project include a "non-grant" instrument? Yes ☐ No ☒**

**H. Describe the budgeted M&E PLAN:**

A monitoring, reporting, and verification (MRV) and monitoring and evaluation (M&E) system will be established. The established MRV/M&E system will be developed to track the progress of the Project, global environment benefits (GEBs) and implementation of the HOB National Strategic Plan of Action (NSPA) of Indonesia through periodic collection of data on selected impact indicators. The project will design a computer-based data collection, storage, and retrieval system and a mechanism to utilize the data for decision-making. The system will build on existing data collection systems of the district governments in the four focus districts, the provincial governments of West, Central, and East Kalimantan, the Ministry of Forestry (MOFr), and nongovernment organizations (NGOs), including the World Wide Fund for Nature (WWF).

Indicator sets will also be closely developed through consultations with the Indonesia REDD+ taskforce and the HOB Working Group and the work of other donors. The impact indicators, categorization, nomenclature, methodology, and electronic system that are currently utilized to monitor biodiversity in Indonesia, Brunei Darussalam, and Malaysia will be considered in the design of the MRV/M&E system to facilitate the development of an eco-region wide database. The Group on Earth Observation-Global Earth Observation System of Systems or GEOSS will also be linked with, including the Forest Carbon Tracking Task, to ensure that carbon estimation and reporting systems are within the technical standards for a global network of national forest tracking system. At project inception, a first step in this process will be to undertake further assessment of the status and hold stakeholder coordination meetings so that existing systems and data can be captured and built on and partnerships strengthened.

Communities will be involved through the operation of a community-based biological monitoring system. In particular, community members will be trained to conduct periodic data collection within their territory using standard formats and methodology that are designed to meet the requirements of scientific rigor and field practicality. In addition, the 4 pilot REDD+ sub-projects will be used to establish site level MRV systems for carbon financing. These will be developed to be consistent with emerging national approaches and good practice, and the development will be linked to national dialogue on MRV systems. Within a stepped-process for Payment for Environmental Service (PES) pilot mobilization, and following 'business case preparation' and supply-chain

analysis, indicators tracking approved PES pilots will be established to evaluate both environmental and socio-economic impacts, as well as contributions of the pilot's to valuation of GEBs and underscoring potentials for the expansion of models.

Global Environment Facility (GEF) Biodiversity tracking tools for Strategic Objectives 1 & 2 will be used to monitor the state of biodiversity and protected area (PA)/national park management. In addition to regular monitoring, PA performance will be reviewed annually by the project and local partners. Reviews will assess implementation performance and achievement of project outcomes and outputs, and; identify issues and constraints affecting implementation and work out a time-bound action plan for their resolution.

The data utilization mechanism will be developed in cooperation with the district, provincial, and national HOB working groups, who will be its main users.

Further details on specific activities related to the MRV/M&E plan, including the responsible parties, estimated cost, and time frame are shown below, and within Annex A, "Project Design and Monitoring Framework".

| Activity | Responsible Parties | Estimated Cost ($) | Time Frame |
|---|---|---|---|
| Inception meeting/workshop<br>Develop/operationalize an MRV/M&E system | Project management team*<br>ADB | 35,000 | Within 3 months of project launch.<br>Within first year of project implementation |
| PES M&E system (including monitoring of ecosystem conditions with sanctioning) | Project management team.<br>Local forest management, communities and ES stakeholders<br>Independent Consultants | 50,000 | Within the first year of project implementation, and following approval of PES business case preparation. |
| Conduct the mid-term evaluation, including Biodiversity Tracking Tool | Project management team<br>ADB | 40,000 | At the mid-point of project implementation |
| Periodic HOB status/progress report; Project implementation report | Project management team<br>HOB Working Group<br>ADB | None | Quarterly and annually |
| Conduct the final evaluation, including Biodiversity Tracking Tool | Project management team<br>ADB | 40,000 | Within six months before or after project completion |
| Field visits and audit | Project management team<br>HOB Working Group<br>ADB | None | Quarterly to yearly, depending on the need |
| Preparation of the project completion report and terminal evaluation report | Project management team and Independent consultant(s) | None for PCR<br>40,000 for TER | Within one year after project completion |

ADB = Asian Development Bank; ES=Environment Services; HOB = Heart of Borneo; MRV = monitoring, reporting, and evaluation; M&E = monitoring and evaluation; PCR = project completion report; TER = project evaluation report.

* The Project Management Team is composed of the Project Team Leader and other international project consultants, particularly the Project MRV Specialist, and GEF Project Evaluation Specialist and their counterpart local consultants and representatives from MOFr and the HOB Working Group. The international consultants will be tapped as the need arises.

Note: M&E planned activities with no budget allocation (i.e., preparation and submission of reports and field visits and audits) shall be undertaken by the concerned national and local implementing agencies and the ADB; expenses for which shall be charged against their respective budget allocations.

## PART II: PROJECT JUSTIFICATION:

### A. State the issue, how the project seeks to address it, and the expected global environmental benefits to be delivered:

Borneo is the world's largest tropical island next to New Guinea. It hosts the largest solid block of remaining contiguous forest in Southeast Asia, which contains an exceptional biodiversity making the island one of the world's top priority areas for conservation. This forest is also highly valued for maintaining the earth's fragile climatic pattern, supporting the diverse culture of over 200 indigenous peoples' groups, and producing goods and services for its 18 million inhabitants while contributing a substantial portion of the gross domestic product (GDP) of the three countries (Brunei, Indonesia, and Malaysia) that has jurisdiction over it. However, Borneo is fast losing its forests. Around 75% of the island was still forested in 1985; this was reduced further to only half in 2005 [2] Its average deforestation rate of 850,000 hectares per year is among the fastest in the world and if this continues, less than one third of the island will be forested by 2020. In 2000 to 2002 however, the rate of deforestation accelerated further to 1.3 million hectares per year or about 2.5 hectares per minute. At this rate, only about 20% of the forest in Borneo will remain by 2020.

Alarmed by this worsening condition, representatives from Brunei, Indonesia, and Malaysia met in February 2007 and signed a declaration to work together for the conservation and sustainable development of the 22 million-hectare forested area located at the center of the island called HOB. It is the largest solid block of natural forest in Borneo, outside which, forests are already largely fragmented. HOB comprises about 30% of the total area of the island. The largest portion is in Indonesia with 57%, which is under the jurisdiction of three (East, Central, and West Kalimantan) of the four Indonesian provinces in Borneo. However, given its stage of development, among the three countries that share the HOB, Indonesia also faces the most challenges to carry out its part in managing the HOB.

The Indonesian Borneo (or Kalimantan) comprises about 30% of Indonesia's total forest area. Due to its less fertile soil, swampy environment, and sparse population, Kalimantan retained much of its forests until the third quarter of the 20th century. The absence of roads likewise contributed to its limited accessibility (only by foot and through river boats), thus restricting the harvesting of forest products.[3] However, increasing demand for forest commodities in the international market and the passage of national policies that promoted the entry of large commercial interests into the island, started to put the HOB forests in danger. For example, Agrarian Law No 5 (1960) effectively transferred the control of land and natural resources from the indigenous peoples to the government, which gave licenses for resource exploitation. The 1967 Basic Forestry Law No. 5 and Mining Law No. 11 allowed outside commercial interests to use the land and natural resources. Logging roads quickly replaced rivers as transport routes, indicating the extent of commercial log harvesting in Kalimantan[4]. These roads did not only fragment the forest but also facilitated other land conversion activities. In the last decade of the 20th century, the expansion of commercial plantations accelerated, which was aggravated by government-sponsored mass in-migration programs. By 2000, a total of 3,307,257 hectares were allocated for industrial timber plantations.[5] The area converted to palm oil plantations reached 969,634 hectares in 2003.[6] The One-Million-Rice-Field Project launched in 1995 aimed to create 1.0 million hectares of rice field in Central Kalimantan brought in 316,000 migrant families from neighboring islands. Migrants were also brought in to work in plantations.

Land clearing caused fire that burned 6.5 million hectares of land in Kalimantan in 1997 and 1998 and blanketed parts of five countries (Brunei Indonesia, Malaysia, Philippines, and Singapore) in Southeast Asia with haze. Half of the land that burned was forest-covered,[7] around three quarters was lowland forest, and one quarter was swamp and

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[2] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt am Main: WWF Germany.
[3] J. Payne et al. 2001. *This is Borneo*. New Holland Publishers, Ltd.
[4] Holmes, D.A. 2002. Indonesia: Where Have All the Forests Gone. Environment and Social Development in East Asia and Pacific Region. *World Bank Discussion Paper*. June.
[5] World Resources Institute. 2002. Global Forest Watch Indonesia. *The State of Forest Indonesia*. Washington D.C.
[6] World Bank. 2001. *Indonesia: Environment and Natural Resources Management in Time of Transition*. February. Washington D.C.
[7] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt.

peat land.[8] Damages from large-scale forest fires that occurred in Kalimantan in 2002, 2005, and 2006 were due to forest conversion.[9] These were aggravated by the drainage systems that are used in large-scale plantations that lowered the water table and affected the neighboring forest.[10] In peat forest, low water tables weathered the trees and eased the spread of forest fire.[11] Local people who were displaced by fires and other forest conversion activities went further inland to clear more forest for settlement and farmland. The immediate result was the loss of over 13 million hectares of forest in Kalimantan from 1985–1997. The rate of forest loss during this period is three times faster than the average for Southeast Asia.[12]

In terms of biodiversity, the loss of forest affects all species but the most vulnerable are those with localized distribution and highly specialized diets and territories. Due to the limitations in the carrying capacity of the remaining undisturbed forests (e.g., availability of food and habitat requirements), not all species can move in similar habitats.[13] On land clearing, the use of fire and agro-chemicals resulted in the loss of plant species by 80% and the subsequent removal of natural stock. Monoculture land use regimens and the continuous application of chemicals have almost eliminated the chance for biodiversity to rehabilitate.[14]

On climate change, the burning of forest and land use change generates a tremendous amount of carbon emissions that has propelled Indonesia to rank third among the world's top emitters.[15] Conversion of land to palm oil plantations in general contributes 4% of total global emissions.[16] Emissions can be much greater for peat forests since the organic carbon that was built up for thousands of years is exposed, decomposes easily, and releases carbon dioxide when peat forests are drained for farming and peat extraction.[17] The organic matter underneath the ground can burn and produce carbon for months when the vegetation in peat forests is burned. It is estimated that in a global scale, the draining, burning, and mining of peat produces 2 billion tons of carbon emissions annually.[18] Also, the loss of forest in Kalimantan substantially reduces carbon sequestration and storage capacity. Given the size of its forest, Borneo is an important component of the fast shrinking band of equatorial forests that function as the "lungs of the earth".

Behind the multifaceted causes of forest destruction in Borneo are issues that continuously aggravate its already vulnerable condition. The following issues must be addressed to arrest if not reverse the current trend:

**1. Insufficient Number of Protected Areas and Limited Financial Support**. Parks and other areas set aside for conservation are vital in maintaining the ecological integrity of the HOB. These areas: (i) ensure the survival of plants and animals against stock collapse; (ii) provide refuge to endangered species; (iii) offset the environmental footprint incurred in areas with other uses; and (iv) maintain the ecological processes that may not survive in a less protected environment. For these reasons, conservation area and its management serve as the

[8] World Bank. 2001. *Indonesia: Environment and Natural Resources Management in Time of Transition*. February. Washington D.C.
[9] WWF-Indonesia. Undated. *Mitigating Climate Change through Peat Restoration in Central Kalimantan.* Climate and Energy Program. Jakarta.
[10] Casson, A. 2003. *Oil Palm, Soybeans and Critical Habitat Loss.* A review prepared for the WWF Forest Conversion Initiative. August.
[11] H. Boehm. 2001. *Ecological Impact of the One Million Hectares Rice Project in Central Kalimantan Using Remote Sensing and GIS*. Paper presented at the *22nd Asian Conference on Remote Sensing*. Singapore. November.
[12] D. O. Fuller et al. 2004. Loss of Forest Cover in Kalimantan, Indonesia since the 1997–1998 El Nino. *Conservation Biology*. 14 (1). pp. 249–265.
[13] K. MacKinnon et al. 1997. *The Ecology of Kalimantan*. Oxford University Press.
[14] A. Casson. 2003. *Oil Palm, Soybeans and Critical Habitat Loss.* A review prepared for the WWF Forest Conversion Initiative. August.
[15] United Nations Development Program Regional Center in Colombo. 2007. Reducing the Impact of Climate Change through Avoided Deforestation. *Inside Asia and the Pacific*.
[16] Greenpeace International. 2007. *Report on How the Palm Oil Industry is Cooking the Climate*. Amsterdam.
[17] WWF-Indonesia. Undated. *Mitigating Climate Change through Peat Restoration in Central Kalimantan*. Climate and Energy Program. Jakarta.
[18] WWF-Indonesia. Undated. *Mitigating Climate Change through Peat Restoration in Central Kalimantan*. Climate and Energy Program. Jakarta.

cornerstone of any protection effort. However, the areas established as national parks are insufficient, comprising only about 20% of the Indonesian HOB. For Borneo as a whole, the area under the national park regime is only about 7%.

While more qualified areas should be allocated for conservation, rigorous, and costly procedures have to be undertaken before a law is passed to allocate areas for this purpose. These include ground-truthing, boundary delineation and zonation plan preparation and implementation. The financial requirements for these activities have to compete for government allocation on more immediate needs, such as education and public health. If conservation is provided with a budget allocation by government, it is usually insufficient to complete the activities within a specified period of time. Additional support from donor agencies and NGOs generally augment government funding suport.

Legal protection is essential to have in place to begin to defend natural areas against land conversion and encroachment. The required documents and outputs for the legal basis of park operation are a necessary prerequisite to carry out park management. The management plan for instance presents the level of protection and restriction to address key threats, defined by zones and defining government commitments, resources and budgets to maintain the park. However, while legal protection is necessary, it will not suffice to protect the park. Within the Indonesian HOB are four declared national parks: Danau Sentarum (132,000 hectares), Betung Kahirum (800,000 hectares), Keyan Mentarang (1,360,500 hectares) and Bukit Baka Bukit Raya (181,090 hectares). These parks are all underfunded and highly dependent on outside assistance. Given significant constraints, there has been an almost uncontrolled encroachment by farms, plantations, and poachers. In a survey in 2001, 14 out of 18 logging concessions in Kalimantan illegally expanded their operations into PAs.[19] Plantation expansion is the main reason for the reduction of protected lowland forest in Kalimantan by 56% from 1985–2001. The vulnerability of PAs, including national parks, arises from shortcomings in their management plans, unmarked zones and boundaries, the insufficiency of logistical support and personnel, low levels of competence and skills, and weakness in law enforcement. The ability to address these issues is constrained by a lack of funds. Government and external financial assistance are not only limited, but erratic. By example, although entrance fees are collected in all the national parks, the amount generated from these fees is insignificant--with only 4,733 recorded visitors from 2003–2007. Protected areas need more reliable and internally-generated fund sources to supplement government and external funds. Without such sources, the sustainbility of the PA operations will always be at stake.

**2. Weak and Conflicting Management of Forest Areas.** Indonesia's forest areas are categorized into four: (i) production forest (allocated for concessions to individuals, corporations, cooperatives, and communities); (ii) conversion forest (allocated for conversion to farms and settlement); (iii) protection forest (allocated for protection of waterbodies, where only non-commercial non-timber product collection is allowed); and (iv) conservation forest (allocated as areas for biodiversity conservation). Aside from weak management, these forest areas are also saddled with conflicts in authority and power. For instance, protection forests are under the jurisdiction of district offices, while the rest of the forest categories are under the authority of the national government.

Protection forests are those where standing trees have the best chance of being left untouched to continuously generate the benefits of biodiversity and climate change mitigation. They also shield conservation forests from encroachment by serving as buffer zones and provide a corridor for migratory species. However, unlike other forest categories that are under the national government, the local (district) government has authority over protection forests. It is estimated that protection forests comprise about 10% of Indonesian HOB with around 53% found in East Kalimantan (631,000 hectares) and the rest almost equally divided between Central (316,392 hectares) and West Kalimantan (252,041 hectares). Both conservation and protection forests constitute about 31% of the HOB. The effective use of both for conservation will be a big boost to biodiversity conservation and climate change mitigation.

[19] L.M. Curran et al. 2004. Lowland Forest Loss in Protected Areas in Indonesian Borneo. *Science*. (303). pp. 1000–1003.

The enforcement level of policies in the HOB has always been low. Together with the shortcomings of these policies, the lack of capability of national agencies and local government units (LGUs) has aggravated the situation. All PA and LGUs are weak in personnel, skills, working systems, logistical support, budget allocation, national-local and inter-office coordination, and standards of bureaucratic behavior. The result is a *de facto* open access regime in many areas with critical resource stock that led to the destruction of natural resources and loss of government revenues. From 1997–1998, more than half of the timber harvested in Kalimantan was illegal.[20] In East Kalimantan alone, the estimated losses in tax revenue from illegal logging and timber processing were estimated at $100 million per year.[21] Around 1 million cubic meters of timber are smuggled from Kalimantan to Sabah every year. Losses by the Indonesian government from smuggling was $580 million in the 1990s'.[22] Due to these illegal activities, the government ends up losing more than just taxes, it is left with a destroyed forest, threatened biodiversity, lost livelihood opportunities, and a higher cost of rehabilitation.

**3. Need for a Policy Environment More Conducive to Sustainable Resource Use.** Indonesia has numerous national and local laws governing the use of its natural resources, including forestry, minerals, water, wildlife, and conservation areas. However, these laws have conflicting provisions, perverse incentives leading to unsustainable use, ambiguity in procedures and area of responsibility, and incongruence with customary laws. The decentralization process, which began in 2001, aimed to develop regional autonomy by devolving powers from the national to the local government. Some of these powers include natural resource management (e.g., legislation, implementation, monitoring, and revenue-raising). Inconsistency of national and local laws is common. There is a need to harmonize them to institute the necessary reforms for a more effective management of the HOB. Well-defined areas for policy reforms can guide both national and local governments in the promulgation of more appropriate and enforceable policies including those necessary to support the PAs and operate the payment for ecosystem services (PES) mechanisms.

**4. Deficiencies in Land Use and Spatial Planning.** What made the problem worse is that boundaries of the protection forests have not been delienated and mapped properly using participatory consultation nor geographic information systems (GIS).. Spatial plans, which are key to sustainable resource use, have not been completed. There is conflict of tenure over some areas. Since the implementation of the 2001 Decentralization Act, districts (i.e., LGUs) have been earning from natural resource extraction through the existing permit system and can turn a blind eye on extractive uses of protection forests. The boundaries of the protection forests have to be established and conflicts must be resolved so that these areas can be mapped, zoned, and incorporated in the respective local spatial plans. Forest cover status and land capability of the protection forests needs to be evaluated so that areas for rehabilitation can be determined and the options for sustainable use can be identified. Districts need to prepare a management plan based on the option that will best serve its economic and social needs within the framework of the HOB NSAP and other relevant national plans (e.g., MOFr Strategic Plan, 2010–2014; Long-Term Forestry Development Plan and the National Strategy in Reducing Emissions from Deforestation and Forest Degradation [REDD]). On the ground, the boundaries and zoning schemes of protection forests must be demarcated and marked. But it must be also recognized that the districts are generally unprepared to take this task given current management capabilities. Such capability must include revenue generating mechanisms to suplant the losses that may be incurred from foregoing other forms of extractive activities.

**5. Minimal Economic Instruments Supporting Sustainable Use.** Financing can be considered as one of the most serious constraints to the conservation efforts in Indonesian HOB. It is estimated that in 2007, the Indonesian government alloted only $0.69 per hectare to conservation forests, [23] way below the estimated average

[20] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt.
[21] Centre for International Forestry Research. 2005. *East Kalimantan. Losses $100 Million Annually in Timber Revenue*. Bogor. 24 February
[22] Environmental Investigation Agency and Telapak. 2001. *Timber Trafficking: Illegal Logging in Indonesia Southeast Asia and International Consumption of Illegally Sourced Timber*. September.
[23] Indonesian HOB National Working Group and WWF. 2010. *Feasibility Assessment for Financing of Heart of Borneo Landscape, Executive Summary*. Indonesia. April.

of $0.90–$9.00 per hectare to effectively manage terrestial PAs.[24] The difference emphasizes the urgent need to generate revenues to support the conservation activities in the HOB. Most of the environmental goods generated in the HOB , such as timber, water and wildlife, are harvested for free or with minimal payment that is not sufficient to finance the sustainability of ecosystem services and natural production mechanisms. The current economic instruments have neither worked as deterrents to unsustainable practices nor as incentives for sustainable practices. This situtation has encouraged over-extraction, low investments in value-added processes, high environmental externalities, and has deprived the government of much-needed funds for law enforcement and natural resource management operations.

Yet almost 40% (4,907,133 hectares) of the HOB is categorized as production forests. Operating in these forests are 383 corporations.[25] The government is able to generate revenues from these companies in three key ways, namely: (i) licensing and royalty fees, (ii) reforestation funds, and (iii) reclamation bonds. The first is applied to all types of extractive industries, the second is collected from timber concession holders, and the third from mining operators. In 2009, $24 million was handed over to the HOB districts and provinces from the Reforestation Fund, with collection from mining companies unknown. The government also imposes penalities to companies that do not comply with corporate social responsibility efforts, which in effect are designed to provide extra income to the government. These mechanisms work as perverse incentives for land conversion and resource extraction since collection is appended to these activities. In addition, the amount paid by companies has covered the costs of resource production and the environmental costs, but the social costs and the impacts generated in extraction and processing are not known. Economic instruments that are more reflective of these real costs have to be put in place to promote and ensure resource sustainability, and a more equitable sharing of both costs and benefits.

**6. Baseline for Carbon Dioxide ($CO_2$) Emissions in the HOB.** While it is reported that the burning of forest and land use change and forestry generate tremendous amounts of carbon emissions that have propelled Indonesia to rank third among the world's top $CO_2$ emitters, there is no baseline information established specific to the important forest and peat lands of the Indonesian HOB. Available records on $CO_2$ emissions in the HOB are fragmented by source and location[26], and it is extremely important to establish concrete baseline data to guide in management planning, decision-making, and in implementing development projects and programs targeting the Indonesian HOB.

**The Proposed Project**

The proposed project is conceived in the context of the integrated ecoregion-based management approach to conservation. An ecoregion is a relatively large parcel of geographic area that harbors a characteristic set of species, communities, dynamics, and environmental conditions.[27] In such an area, large scale conservation can be done to protect broad representations of species and ecosystems, viable populations of plants and animals, and natural processes that hold together the intricate connectivity of various life forms. The survival and resilience of species and ecosystems from natural and man-made disturbances are better ensured in such scale. The conservation of the fullest possible range of biodiversity and ecological processes characteristic of a biologically coherrent geographic area cutting across political boundaries is systematized through the ecoregion-based management approach to conservation.

[24] A. G. Bruner et al. 2004 Financial Cost and Shortfall of Managing and Expanding Protected Area Systems in Developing Countries. *BioScience*. 54 (12). pp. 1119–1125.

[25] Indonesian HOB National Working Group and WWF. 2010. *Feasibility Assessment for Financing of Heart of Borneo Landscape, Executive Summary*. Indonesia. April.

[26] Some of studies conducted are by: (a) A. Budiman et al. 2011. Reference scenario on the development of $CO_2$ emissions through deforestation and forest degradation in Bukit Baka and Bukit Raya National Park and buffer zone, West Kalimantan, Indonesia. *WWF-Indonesia Technical Project Report* (BMU IKI Heart of Borneo, BMU No. 08_II_029), 2011; and (b) A. B. Istomo et al. 2010. Restoration scenario of the important biology corridor between Sentarum National Park and Betung Kerihun National Park with estimation of carbon sequestration by project growth of the mixed plantation in Lanjak, West Kalimantan. *WWF-Indonesia Technical Project Report*. 2010.

[27] WWF. 1998. Guidance for Ecoregion-based Conservation: Principles, Essential Elements and General Approach. In: *Proceedings: Ecoregion-based Conservation Workshop*. Washington DC. January.

The HOB is one of the top priority areas among the 200 ecoregions in the world (Global 200). These ecoregions are considered as the most representative examples of all of the world's ecosystems and are seen to contain exceptional concentrations of species and endemics.[28] Relative to expanding needs and demand for diminishing conservation resources, the Global 200 were prioritized for their potenital to effectively contribute to global biodiversity conservation. The status of each of the 200 ecoregions are categorized into the following based on the level of urgency for intervention: (i) critical or endangered, (ii) vulnerable, and (iii) relatively stable or intact. The HOB is categorized as critical or endangered. As mentioned earlier, the HOB is also considered as one of the few ecoregions where large-scale conservation can still be done to save broad biodiversity found nowhere else in the world. The collective commitment of the three countries (Brunei, Indonesia and Malaysia) to this goal is a key factor. The proposed project will assist Indonesia in meeting its part of this commitment. Indonesia holds the largest part of the HOB area within its jurisdiction, has the most critical areas of high biodiversity, and requires significant assistance given mounting forest threats but limited financial resources and capacities.

The proposed project will be implemented in four of the 10 districts in Indonesian HOB. These districts were chosen in consultation with the Government of Indonesia (GOI), other donor agencies, and NGOs, using the following criteria: (i) strategic location in the HOB in terms of protecting critical environments; (ii) amount of donor assistance; (iii) potential contribution in the reduction of greenhouse gas (GHG) emissions; (iv) significant benefits to local communities; (v) potential for future investments under the Forest Investment Program (FIP), particularly for reducing emissions from deforestation and forest degradation and carbon stock enhancement (REDD+) and PES schemes; and (vi) commitment to work with the project. The districts selected are: (i) Malinau and (ii) Nunukan in East Kalimantan, where the Kayan Mentarang National Park is located; and (iii) Kapuas Hulu and (iv) Melawi both in West Kalimantan, which are identified sites for the PES and REDD+ demonstration and pilot projects. The subject districts will serve as working models to other districts within the HOB to promote an ecoregional approach and to catalyze scaling-up throughout the Indonesian HOB. Potential candidate project sites for each district are presented in Annexes H and I (for REDD+ and PES projects respectively). Final selection of actual project sites will be done during the inception phase, where in-depth and comprehensive consultation meetings will be held with concerned communities and stakeholders.

Although the project is site-based, it will address broad-based issues through more comprehensive and coherent interventions (i.e., international, regional, national, and local). For these interventions, it will closely coordinate with the Malaysian side through the HOB Working Group and the United Nations Development Programme (UNDP)-GEF and the International Tropical Timber Organization-supported initiatives in Sabah and Sarawak, respectively.

The project will contribute to enhance biodiversity, climate change mitigation, and economic development by strengthening the management capacity of the GOI in sustainable forest management and biodiversity conservation. This impact will be seen in terms of: (i) increase in natural forest cover; (ii) increase in the capacity of the area to sequester more carbon, and; (iii) increase in the GDP of villages in and adjacent to PAs. The project will aim at improving management of forest resources and biodiversity in four districts in the Indonesian HOB, and in particular will contribute to the: (i) decrease in forest loss; and (ii) reduction in the incidence of wildlife and biodiversity poaching, specifically for flagship species like the rhino, orangutan, and pygmy elephant. The project will be structured around the following five components:

**Component 1**: **Strengthening Policies and Institutions for Sustainable Forest and Biodiversity Management.** This component will strengthen regional, national and local capabilities for the HOB and PA management. It will formulate local policies and draft national policy guidelines and institutional reform agenda necessary to charting the direction in sustainable resource use, forest management and biodiversity conservation in the HOB. Reform agenda is expected to include opportunities for sustainable financing of PAs (including PES and tax scenarios) and improved forest tenure and forest zonation. In doing this, it will draw lessons and experiences by supporting the implementation of Kayan Mentarang National Park's Management Plan and compliment wider landscape SFM interventions, including village level regulations and co-management arrangements being developed under the Japan Fund for Poverty Reduction (JFPR) sustainable livelihoods sister project.

[28] D.M. Olson and E. Dinerstein. 2002. The Global 200: Priority Ecoregions for Global Conservation. *Annals of the Missouri Botanical Garden*. 89. pp199–224.

**Component 2: Management of Land use, Land Use Change, and Forestry.** This component will establish REDD+[29] demonstration sites[30] to showcase REDD+ strategies. Special focus will be on tapping local communities, including indigenous peoples' communities, enhancing their inputs and capacities in forest and biodiversity conservation activities. Two REDD+ demonstration sites will be developed further into full-blown REDD+ pilot areas that could be potentially be linked to project sustainable finance/PES interventions, and funded under the FIP in the future (see Attachment 11). Details of REDD+ interventions are discussed in Annex H.

The proposed forest areas to be impacted by the project is about 32.36% of the Indonesian HOB or some 4.082 million hectares. Using the default values developed by IPCC (2006), WWF (2011), and Brown (1997), the proposed areas are projected to lose an annual average of 33,274 hectares of forest from 2012 to 2022, causing an estimated 16.18 million tons of carbon dioxide to be released into the atmosphere annually. The area of activity directly resulting from the project is around 1.317 million hectares (Annex G). The estimated lifetime direct GHG emissions avoided through project interventions is 3.233 million tons of carbon dioxide, using investments made during the project's supervised implementation period, as well as investments beyond the project's supervised implementation period but supported by financial facilities (i.e. PES schemes) put in place by the GEF project. This will be done through targeting a 2% decrease in projected deforestation over a conservative lifetime length of 10 years (2013-2022), thus generating the potential to save around 6,655 hectares of forests from being converted to other land uses. Lifetime indirect GHG emissions avoided, net of allowance for uncertainties[31], is estimated to be around 44.5 million tCO2e through conservation and enhancement of the remaining 1.309 million hectares of forests in Kayan Mentarang National Park. The target rehabilitation of 2,000 hectares of degraded lands can sequester around 62,674 tCO2e over ten years, assuming an 80% growth scenario and coupled with implementation of good practices for participatory patrolling, equitable benefit-sharing from forest rehabilitation activities, and forest protection against illegal activities.[32] It is important to note that the baseline values (for 2012) are estimates and still need to be validated and ground truthed at the start of project implementation.

[29] REDD+ broadens the scope of REDD beyond avoided deforestation and degradation activities to include forest restoration, rehabilitation, sustainable management and/or af/reforestation (E. M. Madeira. 2009). Interview by Tiffany Clements. *Curbing Deforestation Emissions: A REDD Primer*. http://www.rff.org/wv/archive/2009/10/08/curbing-deforestation-emissions-a-redd-primer.aspx.

[30] Two REDD+ demonstration sites in Kayan Mentarang National Park, East Kalimantan and one each in the Melawi and Kapuas Hulu districts, West Kalimantan.

[31] The allowance is to cover (1) uncertainties associated with the measures/estimates for carbon emissions and removals, e.g. area or other activity data, carbon stocks, biomass growth rates, expansion factors, leakage, and other coefficients; (2) the reality that as further gains are achieved towards avoiding deforestation, the harder it is to approach zero forest loss. Further details on basis for assumptions are provided in Annex H.

[32] The design of participatory patrol units, which will be one of the main project mechanism for forest protection against illegal logging activities, will be determined in collaboration with local stakeholders (including civil society organizations, media, local communities, and district and provincial governments). The patrol units will operate under the guidance of concerned officials of the Ministry of Forestry Conservation Offices/National Park Offices at the provincial and district levels, in coordination with the local HOB working groups and relevant national line agencies (including, environment, home affairs, police, justice). Experience of districts and provinces within and outside Indonesia in establishing participatory methods for forest patrolling and protection will be considered in the design. Schemes for providing incentives and sharing benefits from forest patrolling and forest rehabilitation will be linked with the design of REDD+ and PES schemes. This phased approach to establishing institutional arrangements for forest rehabilitation and addressing illegal logging ensures local ownership of the process, which contributes to the effectiveness and sustainability of the project's social investments. To provide appropriate intervention, an enforcement capacity diagnosis has to be made. The diagnosis will cover the following aspects: (i) size of area under protection; (ii) staff size; (iii) staff quality; (iv) equipment and facilities; (v) enforcement management activities; (vi) case handling activities; (vii) outside support; (viii) financing; (ix) local legislations relevant to enforcement; (x) incentives and disincentives; and (xi) community participation. An enforcement manual of operation will also be prepared describing the following: (i) enforcement organizational structure and functions; (ii) coordination, communication and reporting; (iii) surveillance and intelligence (including patrolling); (iv) equipment procurement, safekeeping and maintenance; (v) sustainable financing; and (vi) monitoring and evaluation.

**Component 3: Sustainable Financing Mechanisms.** This component will contribute to improving the developing PES system in the HOB, and in Indonesia and the eco-region as a whole. Four potential PES schemes are to be evaluated with explicit estimates of opportunity costs, threat estimates, and biophysical ES targets, with the two most convincing models advanced into an implementation phase. This Component is linked with Component 4 on Sustainable Livelihood Systems for Indigenous Peoples, which will work with local communities on the identification of PES opportunities and will establish benefit sharing mechanisms and institutional arrangements at the community level.

In the PPG phase, government and community consultations took place and initial though broad consensus developed identified four potential PES schemes. The consulted list includes developing PES systems based around: (i) improving protection of forests; (ii) the restoration of degraded lands and maintenance of forest cover; (iii) protection of landscape for biodiversity conservation; and (iv) supply of water to production sectors, and (v) ecotourism development. (See Annex I, with overview description of potential models). Within the first year of the project mobilization, 'business case preparation' of the four models selected will be undertaken. In this stage the potential PES model will be evaluated, with the two most viable projects finalized and moved forward into full PES implementation. Where appropriate, linkage will be developed with ecosystem valuation and mainstreaming of ES values into policy and decision making occurring in WWF Natural Capital and Green Business Network Projects, as well as the GOI led "Green Economy Initiative." Development of PES specific M&E will support implementation, with uses for land monitoring and sanctioning systems developed.

During project preparation the importance of partnership with the private sector was identified as a critical factor for sustainable management of the HOB and for ensuring financial sustainability of PAs and forest landscapes. Stakeholder consultations further identified that key recipients/benenficiaries of forest environmental services, e.g. local water companies, production sectors, tourism operators and other private business may, be important stakeholders in PES development. Potential partners involved may be derived from groups including the "Sustainable Palm Oil Roundtable", and selection criterion will be developed for engaging potential private sector partners, including review of their track record, credibility, commitment to sustainable resource management, willingness to work with local stakeholders and other criterion. Engagement of the private sector, where managed well, stands to facilitate opening of new markets for environmental goods and services and in the process may lead to achieving greater scale in future PES investments. Lessons and best practices that will be generated will be documented and formulated into a PES operational guidelines/manual for application in other districts in Indonesian HOB.

The project will also focus on mobilizing additional resources to piggy-back upon and upscale community focused REDD+ investments in West Kalimantan. In particular, it is anticipated that the project (through ADB inputs) will assist in leveraging an additional $18 million in funding from the Forest Investment Program (FIP), which will be ultimately blended with the proposed project "Sustainable Forest and Biodiversity Management in Borneo" in 2013 through a scope change. With FIP resources, the project will develop sub-national approaches to contribute to implementation of the National REDD+ Strategy and the achievement of national, provincial, and district forest sector objectives. The approach will focus on two districts hosting natural forests with high conservation values, but facing pressure from deforestation and forest degradation. It is proposed that the district level pilot activities will begin in Sintang District and expand to Melawai District, while also drawing upon experience from elsewhere in the Province (including Kapuas Hulu District). In addition to the potential for climate change mitigation and maintenance of other ecosystem services, criteria for selecting specific sites and monitoring progress will include potential socio-economic improvement dimensions, aiming to increase the level of engagement by poorer households and to maximize socio-cultural and livelihood co-benefits. Additional information on FIP is provided in Section C.

**Component 4: Sustainable Livelihood Systems for Indigenous Peoples.**
The project is closely linked to a $2M grant from the Japan Fund for Poverty Reduction (JFPR) that aims to improve livelihood practices of households in the project site and the capacity of village level governments to support these practices. Of the project's targeted 1,898 beneficiary Dayak households, 538 households (or 28

percent) are located in four villages influencing the Kayan Mentarang National Park. The GEF project builds and links closely with the JFPR's main strategies. These include:

i) Enhancing village level regulations and forest enforcement. Activities within this component include:
   a. Baseline assessment of forest tenure, customary laws and ancestral/*adat* lands to be used in project planning and monitoring.
   b. Confirmation and further mapping of tenure status through participatory forums
   c. Detailed design of regulation and enforcement mechanisms.
   d. Working with village management boards to pass the regulations and pilot and refine the enforcement system.

ii) Enhancing local production and marketing of sustainably produced products. Activities within this component include:
   a. Participatory baseline of livelihood systems and institutional support (with gender disaggregated data).
   b. Livelihood improvement planning via livelihood groups (e.g. rattan collectors, rubber farmers) to validate findings and propose sustainable interventions.
   c. Design local government system and matching capacity building.
   d. One scheme to be developed will include PES to support enforcement and protection regulations, to be coordinated with this project, and;
   e. Training of local beneficiaries on livelihood interventions, and local government staff on the operation of they system.

iii) Improving knowledge in sanitation and nutrition at the household level. Activities within this component include:
   a. Baseline survey on the current status of sanitation and nutrition (conducted alongside livelihood survey).
   b. Confirmation and clarifications on baseline, with interventions designed to address specific issues.
   c. Assessment of the village government and its capacities to support proposed interventions, and;
   d. Piloting and refinement of household and village level sanitation and nutrition and interventions.

(For further details please refer to Annex 5 on ADB CDTA for Sustainable Livelihoods Systems for Indigenous Peoples in the Indonesian Heart of Borneo" funded by the JFPR)

**Component 5: Project Management.** This component will generally be concerned with the timely execution/operations of the project, formulation of MRV systems, and the documentation and dissemination of knowledge products on REDD+ and PES schemes. Coordination mechanisms will be established with other projects and development partners supporting sustainable forest and PAs management and REDD+ in the HOB will be established to avoid potential duplication of work and to increase project synergies and resource use efficiency.

The MRV system established will be utilized to track the implementation progress of the HOB NSPA of Indonesia through periodic collection of data on selected impact indicators, including REDD+ and PES financing targets of key forest ecosystems, resource degradation and related data. The Project will design a computer-based data collection, storage, and retrieval system and a mechanism to utilize the data for decision-making. The impact indicators, categorization, nomenclature, methodology, and electronic system that are currently utilized to monitor biodiversity in Indonesia, Brunei Darussalam, and Malaysia will be considered in the design of the MRV system to facilitate the development of an ecoregion-wide database. The project will establish provincial- and district-level agency roles in MRV, and provide guidance harmonizing MRV systems for carbon accounting and ecosystem valuation across sectors and agencies (with ongoing discussions with GOI, WWF and the JICA REDD+ Center of Excellence in Kalimantan). Communities will be involved through the operation of a community-based biological monitoring system. In particular, community members will be trained to execute periodic data collection within their territory using standard formats and methodology that are designed to meet the requirements of scientific rigor and field practicality.

Details of the activities under each of the project components are presented in Supplementary Appendix A of the attached CDTA paper; the expected outcomes and outputs are presented in the project framework.

**Expected Global Environmental Benefits (GEBs)**

The island of Borneo was included as a priority target region in the GEF-4 Sustainable Forest Management Program–Tropical Forest Account (i.e. *Target Region III: Papua New Guinea/Indonesia*). The project recognizes the importance of Borneo forests in securing multiple strategic and global environment benefits including: slowing tropical forest deforestation to mitigate climate change; the protection of globally important tropical forest habitats and biodiversity; degradation of functioning forest ecosystem service flows and their links to agro-forest ecosystems; and – as a co-benefit – multiple social and economic benefits and sustainable livelihood support to HOB indigenous communities. The project will help contribute in attaining these expected global environmental benefits (GEB), as oulined below:

*Contribution of the Project to the Conservation of Globally Important Biodiversity and Habitats.*

The project will protect essential habitat and forest ecosystems harboring extensive and globally important biodivesity. Currently estimated to hold up to 6% of the world's total biodiversity, the HOB is the last large refuge of biodiversity on the Island of Borneo. Approximatley 15,000 plant species were registered in Borneo in 2005[33] with endemic species comprising 34% of these. By example, the HOB includes 7,300 tree species with 267 diterocarps, 7,200 species of orchids, and 7,100 species of ferns. The number of animal species is just as outstanding, with 222 mammal species, 44 of which are endemic. The number of resident birds reached 420 species with 37 endemics. There are 394 fish species with 19 endemics and 100 amphibians.

Borneo has still more species that are yet to be discovered. From 1995–2010 alone, 500 hundred additional species were documented in the HOB. The better known HOB species include the large mammals, such as the vulnerable clouded leopard (*Neofelis nebulosa*) and sunbear (*Helarctos malayanus*), the endangered banteng (*Bos javanicus*) and Asian elephant (*Eleplas maximus*), and the critically endangered Sumatran rhinoceros (*Decenororhinus sumatrensis*). Thirteen species of primates are also considered threatened, including the orangutang (*Pongo pygmaeus*) whose populations are declining.[34] The loss of their habitat is the main reason for their vulnerablility. By example, it was reported that orangutangs had 21 key habitats in Kalimantan, but that by 2002 this had been reduced to only 13 key sites with most existing sites highly fragmented.[35]

The HOB's globally important biodiversity is contained within diverse ecosystems, ranging from freshwater swamp and peat forest, heath and montane forest areas, to dipterocarp and mangrove forests.

-*Freshwater Swamp Forest and Peat Forest.* The HOB hosts the Danau Sentarum, the largest remaining area of primary freshwater swamp forest in Kalimantan and possibly the Greater Sunda Islands (Borneo, Sumatra, Java, and Sulawesi).[36] The HOB harbors the largest known inland populations of proboscis monkeys, false gavial, estuarine crocodiles, deer, wild pigs and birds. It also has a population of about 6,000 orangutangs believed to be the biggest remaining population in Kalimantan. The swamp area of Borneo is part of the 'Sundaland rivers and swamp network', a freshwater ecoregion prioritized among the Global 200 as vulnerable.[37] HOB rivers and swamps are part of the flyway of millions of migatory birds that breed in northern Asia and Alaska and spend their non-breeding season in Southeast Asia and Australasia.

- *Heath Forest.* This forest type is found on HOB sandstone plateaus, and Borneo has the largest heath forest in Southeast Asia.[38] Due to forest clearance and difficult recovery rates due to the pure silica/sand soils left following forest clearing, only 45% of the original cover in Borneo was left in 1986.[39] This was

[33] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt.
[34] International Union for Conservation of Nature. 2010. The Red List of Threatened Species. Gland, Switzerland.
[35] S. Husson et al. 2003. *The Status of the Orangutan in Indonesia: Report to the Orangutan Foundation.* United Kingdom.
[36] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt.
[37] D. M. Olson and E. Dinerstein. 2002. The Global 200: Priority Ecoregions for Global Conservation. *Annals of the Missouri Botanical Garden*. 89. pp199–224.
[38] WWF Germany. 2005. *Borneo: Treasure Island at Risk*. Frankfurt.
[39] K. Mackinnon et al. 1997. *The Ecology of Kalimantan*. Oxford University Press.

predicted to disappear entirely in Kalimantan by 2010, and remains highly vulnerable.[40] Although the species in heath forests may not be as diverse as other HOB forest ecosystems,[41] it nevertheless contains enormous diversity and endemism, including the greatest diversity of tropical pitcher plants (*Nepethenes*) in the world.

- *Montane forest.* This forest is located at an elevation of 900–3,300 meters. In spite of its relative physical isolation, 30% of the original montane forest in Borneo had been destroyed by 2002.[42] The presence of Asian and Australasian flora and fauna make it extremely important to regional and global biodiversity.[43]

- *Dipterocarp Forest.* Among HOB forest types, dipterocarp forests are the most widespread and contain the most diverse species. Remaining dipterocarp forest are threatened, and have become increasinlgy degraded and fragmented. The largest part of this fragment is the project's focal PA, the 1.36 million-hectare Kayan Mentarang National Park.

-*Mangrove Forest.* The HOB is the headwater to 14/20 of the major Borneo rivers systems. These rivers not only nurture freshwater swamps but also mangrove forests. Borneo's mangrove forest is part of the Sundaland mangroves, considered some of the most extensive in the world. Among its remarkable species are Irrawaddy dolphin (*Orcaella brevirostris*), the endangered False gharial (*Tomistoma schlegeli*), threatened Spot-billed pelican (*Pelecanus philippensis*) and Stork-billed kingfisher (*Pelargopsis capensis*). Mangrove forests also hosts important migratory bird species within the East Asian flyway, and are vital to marine biodiversity. As an ecoregion and one of the Global 200, the Greater Sundas Mangroves are considered critically endangered.

The HOB flows into mangrove, intertidal wetlands and near-shore areas around Borneo and extend into the South China Sea in the north and northwest, Sulu Sea in the northeast, Sulawesi Sea and Makassar Strait in the east and Java Sea, Banda-Flores Seas and Karimata Strait in the south. These will benefit from protected ecosystem service flows. These seawater bodies are key fishing grounds of at least seven Asian countries (Brunei, China, Indonesia, Malaysia, Philippines, Taiwan, Vietnam); some of them are among the top 10 marine products exporters of the world. Except for the South China Sea, these seawater bodies are part of the Coral Triangle, that is considered the global epicenter of marine biodiversity. Project efforts to protect key HOB watershed will protect vital connectivity to important marine ecoregions, from ridge to reef.

Without the project, many of globally important HOB species and carbon rich ecosystems will be destroyed by logging, forest conversion, degradation and fragmentation. The proposed project will enhance HOB biodiversity conservation and particularly by supporting the management of a large part of the Indonesian HOB, i.e. the 1.36 million-hectare Kayan Mentarang National Park. This PA is the largest remaining forest fragment in the Indonesian HOB, and area of this magnitude is needed to maintain viable habitats and populations of threatened species. The project will do this by improving operational management effectiveness of the PA through participatory demarcation, improved PA monitoring and enforcement, and local awareness raising. Notably, this PA focused work has broader implications impacting the system-level. By example, the project focuses systematic incorporation of HOB sustainable forest and PA biodiversity conservation values within the larger landscape via:

- Institutional reforms and draft biodiversity and sustainable forest policies, practical local-regional coordinating mechanisms and tri-country dialogue to address HOB tropical forests and biodiversity

[40] World Bank. 2001. *Indonesia: Environment and Natural Resources Management in Time of Transition*. February. Washington D.C.
[41] For instance, it has only 123 tree species per hectare while a dipterocarp forest has 214 species (K. Mackinnon et al. 1997. *The Ecology of Kalimantan*. Oxford University Press).
[42] A. Langner and F. Siegert. 2005. *Assessment of Rainforest Ecosystems in Borneo Using MODIS Satellite Imagery*. Munich: GmbH and GeoBio Center of Ludwig-Maximilians University.
[43] WWF. 2005. Ecoregion Profiles Montane Rainforest. *Gland*. 15 April.

beyond PA and national borders.

- Financing incentives, including piloting Payment for Environment Services (PES) and public-private partnerships (e.g. ecotourism) to support promising eco-compensation work, and importantly sectoral transformation.
- Development of REDD+, MRV systems and local enforcement mechanisms to bolster SFM within adjacent bufferzone protection forests.
- Village conservation models with link made to the JFPR sustainable livelihood project, the project will develop improved livelihood practices for at least 1,898 Dayak beneficiary householdsdependent on HOB forest resources, 28% who live within and adjacent the National Park.

Project activities, processes, protocols and other applicable GEB lessons developed will be shared in HOB regional platforms, and between its protected areas and forest protection areas. The Government of Indonesia has developed senior national level commitments to the protection of the HOB, committed staff and resources to the project, and have highlighted the project's importance to the HOB Strategic Action Plan and informing planned institutional and legislative revisions.

*Contribution of the Project to achievement of Achi Biodiversity target.* The project supports many of the Aichi strategic goals and biodiversity targets. Among these, the project supports:

- Aspects of *strategic goal A, to address the underlying causes of biodiversity loss by mainstreaming biodiversity across governement and society*. Namely:
    - Target 3: The project will develop and apply positive incentives including PES and SFM/REDD+ models to support biodiversity conservation and sustainable use. These mechanisms are developed to contribute to national and regional dialogue and reforms supporting GOI international commitments and to account for sub-national to HOB regional socio-economic conditions.

- The project supports targets of *strategic goal B, to reduce the direct pressures on biodiversity and promote sustainable use.*
    - Target 5: The target emphasizes significant reduction in the rate of natural habitat loss. Indicators for this target will include assessment of parameters related to HOB ecosystem and species diversity, forest intactness and resilience (e.g. forest and river intactness and flows).
    - Target 7: Areas under sustainable management linked to development and implementation of MRV systems under the project, will assess total area under management practices that support forest sustainability.

- The project supports targets of *strategic goal C, to improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.*
    - Target 11: Terrestrial and inland waters will be conserved through protected areas. The project will via track Kayan Mentarang National Park management effectiveness and related trends to mitigate key PA conservation threats over the project life.

- The project supports targets of *strategic goal D, to enhance the benefits to all from biodiversity and ecosystem services*
    - Target 14: Ecosystems that provide essential services will be restored and safeguarded under the program. The project will track trends in pressures from habitat conversion, and via PES track trends in the condition of focal area ecosystems. If appropriate, information tracking ecosystem changes may be complimented by JFPR project data on sanitation and nutrition to assess the relationship between ecosystem services and human well being.
    - Target 15: Ecosystem resilience and carbon stocks will be enhanced through project conservation and restoration and tracked for their contributions to habitats, biodiversity and the enhancement of forest carbon stocks.

- The project supports targets of *strategic goal E, to enhance implementation through participatory planning, knowledge management and capacity building.*
    - Target 18: Traditional knowledge and customary use will be respected and reflected in design and implmentation. With links to the JFPR project , the project will ensure customary laws on forest management and ongoing formal and informal systems continue to be integrated into project design for ecosystem and enforcement enhancements, management capacities and related community interventions.

*Contribution of the Project to Sustainable Forest Management*

Failure to introduce sustainable land use practices will see the continued destruction of the HOB high-carbon, high-biodiversity tropical forests. Sustainable forest management will be strengthened alongside improved PA and biodiversity management interventions including (i) the improved management of production and protection forests at district and village levels; (ii) conservation of critical forest areas to support environmental services and livelihoods; and (iii) design and implementation of SFM/REDD+ and PES schemes. The project's SFM work is intended to closely build upon National Park bufferzone development, village level regulations for forest use and sustainable livelihood development, and the REDD+ demonstration programs and upscaling via FIP.

Placing a large forest area like the HOB into an improved sustainable management and protection regimen will not only reduce pressures on forest resources and safeguard sustainable flows of forest ecosystem services, but it will also reduce the fragmentation of habitats important to biodiversity. The project will build both institutional and technical capacities to enable the HOB stakeholders to take stock of and monitor the status of important forest resources (i.e. through the development of MRV system) and test and adopt collaborative approaches (e.g. through the establishment of PA co-management and village conservation models). Further, the project will support sustainable private sector business engagement and community livelihood benefits (e.g. through private sector dialogue on SFM, sustainable NTFP harvest technologies [under the linked JFPR project], and the development of PES and potential carbon market revenues via REDD+). Policy and regulatory frameworks relating to SFM in forest landscapes and PA management will also be revised in Indonesia (at national and local levels) and regional dialogue will support policy and legal reform and harmonization between the 3 HOB countries. This will support Indonesia's Strategic Plan of Action for the HOB, improved decision-making, forest law enforcement and governance mechanisms and support for the empowerment of community and household stakeholders in PA and forest bufferzone management and SFM best practice.

*Contribution of the Project to Addressing Climate Change*

If unabated, forest loss, conversion and degradation in the Indonesian HOB will contribute further to the adverse effects of global climate change. The proposed project will mitigate climate change by reducing tropical forest degradation and conserve and enhance carbon stocks in the Indonesian HOB. Forests are key carbon sinks[44] and, in general, absorb ca. 20% of global carbon emissions. The amount of carbon that tropical forests normally absorb is estimated at ca. 4.8 billion tons per year. This project is expected to contribute significantly to this objective, particularly for the HOB to continuously function as a vital 'lung of the earth' With a total area of ca. 12.613 million hectares,[45] the Indonesian HOB has huge amounts of carbon stored in its forests, calculated to be about 1,671 million tons, with an equivalent $CO_2$ of about 6,133. million tons (Annex H, Table H.1). However, if forest destruction estimated at 246,020 hectares[46] per year continues unabated, a corresponding 119 million tons of carbon dioxide will be emitted into the air annually (see Annex H, Table H.2). This equates to ca. 1,190 million tonnes CO2 over ten years.

[44] R. K. Dixon et al. 1994. Carbon Pools: Flux of Global Forests Ecosystems. *Science*. 263. pp. 185–190.
[45] Kelompok Kerja National (National Working Group) HOB. 2008. *National Strategic Plan of Action: Indonesian HOB*.
[46] General Director of Forestry Planning, Ministry of Forestry. 2009. *Statistics of Forestry 2008*.

This project will positively impact sustainability of ca. 32.36% of the Indonesian HOB, or some 4.08 million hectares of forest area.[47] This is broken down as follows: 1.36 million hectares of Kayan Mentarang National Park in Malinau and Nunukan, East Kalimantan; 0.42 million hectares of forests in Melawi District, West Kalimantan; and 2.30 million hectares of forests in Kapuas Hulu District, West Kalimantan. By implementing protection measures without engaging in rehabilitation activities (and assuming that there will be zero forest loss in the project areas), the project would be able to maintain an amount of 540.9 million tons of carbon stock with $CO_2$ equivalent of 1,985.119 million tons (Annex H, Table H.1).

Based on a project outcome target of 2% decrease in forest loss (Annex A), GEF-supported interventions will avoid lifetime direct carbon emissions of around 3.233 million tonnes $CO_2$ over 10 years (Annex G & H). Support to implementation of the management plan for the Kayan Mentarang National Park, will have a further indirect impact to reduce the incidence of deforestation and degradation and will avoid the release of around 44.5 million tonnes $CO_2$ over ten years (taking in consideration a 15% allowance for uncertainties) (Annex H, Table H.8). A further long-term impact of the project will be to establish required systems and capacities that can support a target of zero net forest loss in the future. Furthermore, the 2,000-hectare rehabilitation project, assuming an 80% growth assumption, can generate a lifetime indirect carbon sequestration of around 62,674 tons $CO_2$ (Annex H, Tables H5-H7). Overall, the project's contribution to addressing climate change is estimated at 47.797 million tonnes $CO_2$, or 4% of projected $CO_2$ emissions in the Indonesian HOB over a ten year period (see Annex H, Table H8).

*Summary - Measuring Project contributions to GEBs:*

The measurable impacts of global environment benefits at the output level include:

(i) 1.36 million ha of PAs in HOB under effective management (with an indirect impact on a further 2.72 million, or combined 4.08 million ha covering 32.36% of the Indonesian HOB).

(ii) PA planning and management capacities strengthened, leading to a 6% increase in effective critical habitat for the globally endangered species.

(iii) Decrease by 2% in projected deforestation over a conservative lifetime length of ten years (2013-2022), leading to an avoided loss of 6,655 hectares of tropical forest from conversion to other land uses, which will continue to support globally important biodiversity, as well as the services of HOB ecosystems and critical catchment areas.

(iv) Estimated lifetime direct carbon emissions avoided through project interventions[48] of 3.233 million tonnes $CO_2$; and lifetime indirect GHG emissions avoided[49] of 44.5 million tonnes $CO_2$.

(v) 2,000-hectares of REDD+ pilot implementation, supporting direct carbon sequestration of ca. 62,674 tons $CO_2$.

(vi) Improved enforcement systems for PAs and buffer zone landscapes, improved monitoring systems, strengthened policy and regulations for PAs and SFM in forest landscapes, and increased public awareness.

(vii) Establishment of 2 PES models to support sustainable financing and community livelihoods in forest landscapes. Mobilization of at least $18 million in funds for further SFM and REDD+.

**B. Describe the consistency of the project with national and/or regional priorities/plans:**

The concern over environmental degradation and climate change is one of the 10 key poverty issues identified in *Indonesia's National Medium-Term Development Plan (2010–2014)*. To respond to these challenges, the plan set the following five development agenda: (i) economic development and increased welfare of the people; (ii)

[47] Forest cover area (in hectares) was sourced from the Landsat Image interpretation as undertaken by the Ministry of Forestry, Indonesia, 2010.

[48] Among others, project interventions come in the form of: (a) undertaking of protection measures and sustainable management implementation through the strengthened capacity of protected area and forest authorities, (b) conduct of massive IEC advocacy on forest and biodiversity management, and (c) strong participation and involvement of local communities in REDD+ pilot projects and PES schemes.

[49] Net of allowance for uncertainties

enhanced good governance; (iii) strengthened pillars of democracy; (iv) law enforcement and eradication of corruption; and (v) inclusive and just development. The agenda obviously recognize that the drivers of environmental degradation and climate change are economic and managerial constraints. The plan has a specific target for Kalimantan, which is to increase productivity and value added products from natural resources in the context of ecological balance and economic growth. This is consistent with a number of the country's policies. These include the following laws: *Act 26/2007* (requires the local government to revise their spatial plan), Regulation 6/2007 amended as *Regulation 3/2008* (specifies the licensing of forestland including environmental services), *Presidential Instruction 4/2005* (directs the eradication of illegal logging) and Act 22/1999 amended as *Act 32/2004* (provides for the decentralization of powers and functions to local governments).

The project is consistent with the following plans: *Forestry Long-Term Development Plan, Roadmap for Revitalization of Forest Industry, MOFr Strategic Plan for 2010–2014, 2000 Forest Law Enforcement National Strategy, National Action Plan for GHG Emission* and *National Draft Strategy for Reducing Emission from Deforestation and Forest Degradation in Indonesia (Readiness Phase, 2009–2012)*. These plans highlight Indonesia's priorities in forest management, which include combating illegal logging, forest rehabilitation, protection and securing forest areas. Further, *Indonesia's Poverty Reduction Strategy* (2005) identified access to management and use of natural resources and the protection of the environment as one of the rights to be pursued in reducing poverty. The *National and Regional Spatial Plan* upholds this right by directing that physical plans must maintain conservation areas and rehabilitate degraded environment while supporting sustainable natural resource use. The strategy expressly recognizes that natural resources constitute the foundation of any long-term development in Kalimantan.

*Law No. 23/1997* describes authorities, rights, and responsibilities governing the management of the environment, including the delegation of authority to local (provincial, district, and municipal) governments. Government *Regulation 6/2007 on Forestry* provides general guidance on the management of forest resources and regulating management of environmental services. These laws, combined with *Law No. 34/2000* and Government *Regulation 65/2001 on Regional Taxation*, as well as specific laws regulating water resources, form initial basis for defining PES in Indonesia.[50] Despite this legislation, current processes for transferring benefits from buyers to providers of environmental services are lengthy, and this has contributed to lost funds to finance the HOB's conservation. The Government is aware of current regulatory and market-based shortfalls, and is supportive of developing payment for ecosystem services (PES) pilots at the local and national levels. This project builds upon the Government led *'Green Economy' Program*, WWF HOB natural capital valuation and others' efforts to develop, trial and model viable PES operational modalities successfully linking PES theory to on-the-ground implementation. Importantly, project M&E will track environment and socio-economic impacts generated by PES, aiding valuation of the component and GEBs.

Moreover, within *Indonesia's HOB National Strategic Plan of Action*, the country sets the direction in protecting the valuable forest resources of this biodiversity hotspot. The objectives of NSPA are as follows: (i) support sustainable natural resources management in the network of conservation areas and PAs as well as production forests and other land uses; (ii) implement policy and law enforcement that support sustainable area management; and (iii) implement sustainable development based on scientific methods and local wisdom for community welfare improvement. The proposed project directly responds to these three objectives. The NSPA also outlines the tasks that the GOI will perform in fulfilling its part in implementing the *HOB Tri-Country Strategic Plan of Action.*

The effort to conserve HOB is supported by the Brunei, Indonesia, Malaysia Philippines–East ASEAN Growth Area (BIMP–EAGA) member countries and the Association of Southeast Asian Nations (ASEAN), who recognize the significant contribution of the HOB in maintaining the natural mechanisms that support the growing prosperity of Southeast Asia. In particular, the *2006 Action Plan* and draft 15-year *Regional Environmental Program of the BIMP–EAGA* include the HOB as a flagship project. In addition, the 2007 *ASEAN Declaration on Environmental*

[50] Ferdinandus Agung Prasetyo, et. al, "Making Policies Work for Payment for Environmental Services (PES): "An evaluation of the experience of formulating conservation policies in districts of Indonesia."Journal of Sustainable Forestry, 28:415–433, 2009

*Sustainability* and *Singapore Declaration on Climate Change, Energy, and Environment* express outright support for the HOB.

The proposed project will not only contribute in the implementation of the above-cited national and regional plans and policies but will also contribute to international conventions and commitments, where Indonesia is a signatory. The most prominent are the *Convention on Biodiversity, Convention on International Trade on Endangered Species, United Nations Framework Convention on Climate Change (UNFCC),* and the *Millennium Development Goals*. The proposed project will also serve the recent agreements of the UNFCC Conference of Party (COP). The Bali COP13 (2008) adopted the decision to stimulate action on REDD in developing countries. The Cancun COP16 (2010) agreed to move ahead with REDD+, which aims to reward developing nations for protecting, restoring, and sustainably managing forests. Avoiding deforestation and land use change is considered as one of the cheapest options for cutting global greenhouses gases and the project will have specific component to address this concern.

**C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:**
The proposed project is aligned with the Biodiversity Focal Area and the LD-SFM/Tropical Forest Account (TFA) funding window. Specifically under GEF-4 SFM, the project supports strategic objectives of:

- SO-1: Conservation and sustainable use of forest biodiversity; and;
- SO-2: Sustainable management and use of forests resources.

SFM in project measures are pursued through GEF-4 focal area strategic programs, including:

- SFM- SP1 (BD1) Sustainable Financing of Protected Area Systems;
- SFM- SP2 (BD3) Strengthening of Terrestrial Protected Area Networks.
- SFM/LD/TFA-SP-2: Supporting Sustainable Forest Management in Production Landscapes.

Further details on the projects consistency with these strategic programs is provided below:

**SFM-SP1: Sustainable Financing of PA Systems at the National Level**.

This strategic program will target PAs, their bufferzones and community forest areas to catalyze revenue mechanisms to contribute to PA sustainable financing. The project will target development of: Payment for Environment Systems (PES) and associated benefit-sharing mechanisms linked to the Kayan Mentarang National Park in Malinau and Nunukan, East Kalimantan, forests in Melawi District, West Kalimantan, and forests in the Kapuas Hulu District, West Kalimantan. In addition the project will develop an MRV system for REDD+ and M&E to track and guide progress of the implementation of the HOB NSPA of Indonesia.

PES financing schemes (e.g., payment for the supply of water) will be explored to provide financial streams for critical HOB forest ES conservation. The component is designed to strategically target ES and benefit local communities within a) protected area sustainable use zones, and in b) community forest areas adjacent PA bufferzone. Per STAP advisory document "Payment of Environmental Services and the Global Environment Facility," two key points of entry for this work include:

i) The project will establish realistic and tailored potentials to pilot direct payments for ecosystem services. The rationale is that as spatially explicit estimates of opportunity costs are combined with specific biophysical ES targets and threat estimates (i.e. two site specific PES frameworks piloted), user payments will be developed to respond to current HOB land use trends and produce noticeable shifts toward improved conservation. The work is deemed important to HOB communities, PAs and overall conservation planning, and is viewed for its contributions toward informing sector development planning and financing direct payments for GEBs. Where appropriate, the work is to be linked to the WWF Natural Capital Project and GOI "Green Economy" inatives, both mainstreaming ES valuation into local

decision making. The work is also expected to inform country-wide PES dialogue and legislative reform, and lead to PES upscaling in the HOB.

ii) As a co-financed multiple service strategy, the project will also aim to leverage HOB biodiversity considerations by developing programmatic links layering and piggy-backing PES with REDD+ pilots, sustainable use, and benefit sharing. The project will assist this through development of both user-financed PES, the joint prioritization of forest areas at risk, and by developing and documenting best practice in REDD+ and PES. The project will thus be targeted to maximize impacts and cost efficiency, bolstering ES co-benefits including biodiversity and carbon protection synergies.

The business case for four PES projects identified during the PPG phase will be further pinpointed in ecosystem service supply-chain analysis to develop and implement at least two convincing PES models. Operational guidelines for the implementation of PES financing mechanisms in the HOB will be formulated and upscaled to generate sufficient revenues that will help sustain protection, conservation, and development activities in the entire HOB.

The strategic program will also support M&E for empirical testing of PES' effectiveness (i.e. its environment and socio-economic impacts), contributions to REDD+ and HOB NPSA MRV, national and eco-regional decision-making and GEBs. In addition methodologies, operational guidelines, partnership arrangements, and the testing of benefits-sharing mechanisms for PES in the HOB will support the development of a national system, and opportunities for up-scaling PES. This intern will support additional revenues that will help sustain protection, conservation, and development activities in the entire HOB eco-region.

**SFM-SP2: Strengthening Terrestrial PA networks**.

Through this strategic program, the project targets i) institutional/policy level reforms, and ii) PA site-level interventions. With regard to legal framework reforms, the project aims to provide clearer direction in the management process for attaining more sustainable forest resource and biodiversity management in the HOB. Indonesian and regional governments have numerous and at times conflicting national and local laws governing the use of natural resources and the management of protected areas Tri-country and national dialogue, and review of existing laws will assist definition of areas of complementation and harmonization to develop shared ecosystem, forest use and biodiversity values. In this process, a reform agenda will be developed, and national and local policies and legislation for PA and resource use management will drafted. These interventions also compliment the objectives of SFM-SP4 (BD 4), which targets the strengthening of policy and regulatory frameworks for mainstreaming biodiversity; and SFM/LD/TFA-SP-2, which aims to support sustainable forest management in production landscapes, including efforts to strengthen enabling policies and institutional arrangements for managing forest resources. This will be supported through the establishment of a critical platform for regional dialogue on policy and legal frameworks for the sustainable management of the entire HOB landscape across the 3 countries, including PA and production forest management.

Following reforms to the existing PA management system and network, site level interventions will be developed targeting Kayan Mentarang National Park. National Park management effectiveness will be improved and strengthened (with co-benefit in the reduction of GHG emissions from forest loss and degradation, covering 1.36 million ha) through refinement and implementation and of its operational management plan, which includes: (i) facilitating the approval of the park's boundary and its field demarcation; (ii) final delineation of different zones in the 11 territories in the park, particularly in developing the buffer zone management framework; (iii) conduct of capacity building interventions for increasing knowledge, awareness, and skills of local stakeholders on park co-management[51] through conservation village models; (iv) implementation of participatory park enforcement system; (v) participatory monitoring system of park activities; (vi) establishment of database for flagship species and monitoring regimen; and (vii) strategies for addressing and resolving transborder issues on forest resource management.

**SFM/LD/TFA-SP-2: Supporting Sustainable Forest Management in Production Landscapes.**

[51] This will include the establishment of co-management units in the park for specific objectives including: habitat protection, ecotourism development, cultural preservation, benefit-sharing, etc.

The HOB encompasses one of the three remaining regions of large, intact, tropical forests.[52] The HOB landscape is however at increasing risk of fragmentation, and comprehensive management approaches must consider the management of PAs, production landscapes, and community livelihood development. This strategic program will foster multiple land uses and provide connectivity and additional habitat for threatened species through address of land degradation in the PA and its bufferzone. This includes policy framework revisions that rationalize sustainable forests and biodiversity conservation, including rights based approaches (e.g. improved tenure arrangements based on traditional rights, i.e. *adat*); PA zonation (including vulnerability mapping, monitoring and managing for compatible use of HOB forest resources) and PA operational management and SFM planning addressing forests both inside and adjacent the PA.
The project targets 4/10 priority HOB districts, which include: (i) Malinau and (ii) Nunukan in East Kalimantan, where the Kayan Mentarang National Park is located; and (iii) Kapuas Hulu and (iv) Melawi both in West Kalimantan, which are identified sites for the PES and REDD+ demonstration and pilot projects. As part of this, project engagement at the village level will be critical in order reducing deforestation and forest degradation, conserving biodiversity values and reducing poverty. The project will therefore support a landscape scale approach that will target key villages situated within forests and national park buffer zones and will support these communities to take a greater role in the sustainable management of forest resources. It will do this through establishment of management units for specific objectives including community forest patrols and habitat protection and the up-scaling SFM outside of PAs. The strategic program will thus be utilized to support expansion of site-based (SP1 and SP2) intervention lessons to develop catalytic effect informing district, provincial and SFM/REDD+ and PES national development dialogue and inclusion of biodiversity considerations within production landscapes/sectors.

To note, the GEF project is closely linked to a "sister project" funded by JFPR (see Component 4) that will pilot sustainable livelihood interventions in 13 Dayak villages (all located within or around Kayan Mentarang NP) which aims to arrest marginalization of the Dayak communities by improving their security of tenure, the economic benefits of sustainable natural resource use, local governance towards community development, and improved access to social services.[53]. This work is developed to address forest fragmentation and reduce forest degradation whilst also recognizing and promoting livelihoods that are 'biodiversity-friendly.'

**LULUCF and GHG reduction co-benefits**: While GEF funds will not be utilized to support the REDD+ demonstrations under Component 2, supported by ADB's Climate Change Fund, are consistent with the GEF strategic program on land use, land use change, and forestry (LULUCF). This will include 4 pilot sites that will support reduced GHG emissions and increased carbon sequestration from SFM and the rehabilitation of 2,000 hectares of degraded forest areas (1,000 hectares in Kayan Mentarang National Park and 500 hectares each for Melawi and Kapuas Hulu districts). In addition the project will support the development of systematic methodology to measure carbon stocks in land-use systems. It will also provide estimate of baseline emissions for the Indonesian HOB. Pilot sites will also be considered for their PES potential including suitability for carbon market financing.

### C. JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES.

GEF funding will provide technical assistance and investments to help operationalize key PAs and support the development of innovative sustainable financing schemes for conservation. In particular, the GEF will mainly finance: (i) the support for the implementation of the Kayan Mentarang National Park management plan and the creation of management body. The project will support and build on earlier key activities contained in the management plan, such as: (i) facilitating the approval of the park's boundary and its field demarcation; (ii) final

[52] The initial targets for the TFA are the three regions of Amazonia, Congo Basin, and New Guinea/Borneo. TFA is a GEF funding/incentive mechanism developed to augment the limited funding provided under the RAF system in GEF-4 for countries that engage in SFM and LULUCF-related activities to help reduce deforestation, and at the same time reduce GHG emission.
[53] This work will be guided by the results of consultations and agreements reached with the Ministry of Forestry (MOFr), park management authorities, the Malinau and Nunukan District Environment Offices, and representation of villages and concerned local indigenous peoples.

delineation of different zones in the 11 territories in the park, particularly in developing the buffer zone management framework; (iii) conduct of capacity building interventions for increasing knowledge, awareness, and skills of local stakeholders in biodiversity protection, sustainable natural resource use and PA collaborative management by establishing conservation village models; (iv) implementation of participatory park enforcement system; (v) participatory monitoring system of park activities; (vi) establishment of a data base for flagship species; (vii) strategies for addressing and resolving transborder issues on forest resource management. Without the funding from GEF these activities would not take place or would be slower to develop. As a result, the management of Kayan Mentarang National Park would continue to be weak, making it more vulnerable to further illegal logging and forest degradation.

The GEF will also finance the design (4) and pilot (2) PES financing mechanisms to support the HOB. This will include development and prioritization of business case scenario, necessary benefit/user consultations, training supporting the pilots and PES framework and ecosystem monitoring. The absence of sustainable financing and total reliance on inadequate government allocation are major constraints to the management of forest resources in the HOB. To address this issue, the financial needs of these areas to meet its objectives will be evaluated. The extent to which current allocations and revenues can support the financing needs of forest areas will be determined to estimate the shortfall in funding. Mechanisms will be designed to cover the financing gap, including systems to generate and manage funds and plow back funds to their operations. Four potential PES designs will be carried forward into implementation and pilot tested (see Annex I). Lessons learned and best practices will be documented and translated into a PES operational guidelines and/or manual supporting national PES dialogue and application in other areas of the HOB. Without the funding from GEF, opportunities to develop sustainable financing mechanisms will not be captured or will be slower to develop, resulting in a continuation of budget constraints for PA management, lost opportunities to improve livelihoods for forest dependent communities, and failure to capture opportunities for dialogue, engagement and financing from the private sector.

## D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES

The proposed project will coordinate with the following initiatives locally and regionally (i.e., both in the Indonesian HOB, as well as in the Malaysian and Brunei HOB):

**1. Forest Investment Program (FIP).** Indonesia has been selected as a pilot country of the FIP, which is a targeted program of the Strategic Climate Fund (SCF), one of two funds under the Climate Investment Funds (CIF). FIP supports the efforts of developing countries to reduce emissions from deforestation and forest degradation, conservation and sustainable management of forests, and enhancement of forest carbon stocks (REDD+). It promotes sustainable forest management leading to emission reductions and the protection of carbon reservoirs by providing scaled-up financing to developing countries for REDD+ readiness reforms and public and private investments, identified through national REDD+ readiness or equivalent strategies. The Multilateral Development Banks (MDBs)—Asian Development Bank (ADB), the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC)—serve as partners to the GOI under the terms of the CIF in programming the FIP resources and implemented projects with FIP funding. Since 2010, a number of joint programming missions have been undertaken to identify the best use of FIP resources under a Forest Investment Strategy. Based on the current draft FIP Investment Plan, it is proposed that FIP resources will be channeled through three implementation projects: (i) Community-Focused Investments to Address Deforestation and Forest Degradation through ADB; (ii) Promoting Sustainable Management of Peatlands through Capacity Building for Spatial Planning at the Sub-national and Community Levels through the World Bank; and (iii) Strengthening Forest Enterprises to Mitigate Carbon Emissions through IFC.

For the ADB-supported project ($17 million), it is currently proposed that implementation will be linked to co-financing from ADB, the GEF and Japan through a change in scope to the ADB CDTA on Sustainable Forest and Biodiversity Management in Borneo (to be confirmed). Specific activities will include piloting a system for provincial registration of community forest management tenure agreements, establishing a grievance and redress mechanism involving district governments and Forest Management Units, setting up a revolving fund to pilot performance-based incentive schemes for REDD+ based on customary and village-level cooperation to prevent

forest and grass fires and assist natural regeneration, and setting up a prototype fund to pilot or scale-up performance-based incentive schemes for the private sector to practice sustainable forest management. Capacity building activities organized through the provincial component will support work at both the provincial and district levels, with links formed to transboundary forest eco-region management efforts under the Heart of Borneo Program.

**2. Forest Carbon Partnership Facility (FCPF)**. The World Bank FCPF is a global partnership focused on REDD+. A "readiness fund" assists forest countries with development of REDD+ systems and policies, helping to lay the groundwork for future payments and financial incentives for REDD+. In Indonesia, the MOFr is implementing an FCPF REDD Readiness Grant signed in June 2011 for a range of activities, including analytical work, management of the readiness process, reference emission level estimation, and MRV. The FCPF has also provided a grant to the Indonesian NGO Telapak for a study entitled "Indigenous Peoples and Climate Change in Indonesia". The project focused on indigenous peoples' issues, and developed a database on indigenous peoples with information on history, spatial plans, potential conflict, boundaries, natural resources, and institutional settings. The ADB-GEF project will adopt the framework created by the FCPF prepared by Indonesia to be ready for future systems of financial incentives for REDD+ under the facility. The project will build on the provisions of the Readiness grant signed by Indonesia, the REDD+ strategy drafted and now under consultation, the MRV system being designed, and the REDD+ national management arrangement set up that was developed under the framework. All these will guide the project in the implementation of its REDD+ demonstration areas/pilot sites in the four districts identified as project sites.

**3. The Indonesia Forest and Climate Trust Fund (IFCTF)**, under preparation by the World Bank, aims to design a benefit sharing mechanism and disburse grants to participating Dayak communities in the peat land areas of the Ex Mega Rice Project that are targeted by the Indonesia-Australia Forest Carbon Partnership (IAFCP) and its Kalimantan Forests and Climate Partnership (see below for more information on the IAFCP). Community-based grants, based on a participatory approach, will support livelihood and restoration activities on degraded peat lands. The project will also test environmental and social assessment tools within a REDD+ framework. The World Bank cooperates on the IFCTF with AusAID, MOFr, BAPPENAS, and local government officials and stakeholders. The ADB-GEF project will seek to learn from and build on the participatory approaches and tools being prepared by the IFCTF and apply then at the site level.

**4. The Program on Forests (PROFOR)** is a World Bank-managed trust fund that is assisting the GOI in examining financing instruments to create appropriate incentives for forest preservation at the local, district and provincial levels. Water Management for Climate Change Mitigation and Adaptive Development in the Lowlands is another trust fund-supported activity working with BAPPENAS to develop a national strategy for management of lowlands (which include many peat swamp areas) and to facilitate an informed policy dialogue. The ADB-GEF projects will make links with PROFOR under component 3 on sustainable financing.

**5. The United Nations Collaborative Initiative on Reducing Emissions from Deforestation and Forest Degradation** (UN-REDD) Programme provides assistance to developing countries in preparing and implementing national REDD+ strategies. In Indonesia, UN-REDD collaborated with BAPPENAS on a series of national and regional stakeholder consultations as part of the development of the National REDD+ Strategy. In October 2010, the UN-REDD Programme also selected Central Sulawesi as a pilot province to prepare and test strategies for REDD+ implementation. Initial work has generated considerable amount of lessons and experiences that the ADB-GEF project may adopt. Coordination with existing UN-REDD undertakings will be made to ensure that best practices are applied. Special attention will be focused on: strategies applied in strengthening the role of indigenous peoples, local communities, other forest-dependent communities and civil society organizations in REDD+ activities; transforming land and resource use patterns in order to reverse, slow or deflect drivers of deforestation and forest degradation; operational systems and capacities to receive performance-based payments for REDD+ to leverage additional investment flows; maximizing multiple benefits derived from forests and the practice of REDD+; and developing MRV systems, This will be done to ensure that broad lessons are learned from complementary initiatives and thus avoiding duplication of efforts. The Nature Conservancy-supported REDD+ project in Berau, called the "Berau Forest Carbon Program", also provides significant lessons learned

ranging from improving forest management, mapping of local communities and the developing carbon accounting and other processes that improve spatial planning and governance. The project will build on these initiatives, particularly in implementing its REDD+ component.

**6. The Government of Norway**. In May 2010, Indonesia signed a letter of intent with Norway to enter into a performance-based initiative for REDD+. The Norway-Indonesia REDD+ Partnership will offer up to $1 billion to the GOI for success in reducing deforestation and forest degradation. It establishes a phased program of action, focusing first on establishment of a national strategy, a management agency, an agency for measurement, reporting and verification, a pilot province for REDD+, and a financing instrument. In the first phase (2010–2012), funds have been spent on developing Indonesia's National Strategy of REDD+ and establishing initial enabling policies. Phase Two will focus on preparing Indonesia for the contributions for verified emissions reductions and implementing the province-wide pilot in Central Kalimantan.

**7. Australia-Indonesia-Australia Forest Carbon Partnership (IAFCP).** This effort includes support by the Australian government to assist Indonesia in MRV development through the Indonesia National Carbon Accounting System and the Forest Resource Information System. The IAFCP also supports large-scale REDD demonstration actions in Central Kalimantan and (more recently) Jambi provinces. The goal of the Kalimantan Forests and Climate Partnership is to demonstrate an effective approach to reducing emissions from deforestation and forest degradation, with an emphasis on peat lands. In the initial period, the project will avoid deforestation of 50,000 hectares of peat swamp forest and rehabilitate an additional 50,000 hectares of degraded peatland to create a buffer around the existing forest and reduce further degradation. Australia is currently developing its second REDD+ project in Jambi province, the Sumatra Forest Carbon Partnership.

**8. The US Agency for International Development** funds the Indonesia Forest and Climate Support (IFACS) Project to assist the GOI in conserving the country's forests, wildlife, and ecosystem services. The four-year project works with national and local government agencies, NGOs, local communities and the private sector in target sites on three islands. It is expected to result in benefits including: a 50% reduction in the rate of forest degradation and loss for six million hectares; improved management of 3.5 million hectares; a 50% reduction in GHG emissions; a 20% increase in financial resources for forest management, increased transparency, and access to information to strengthen capacity of government, civil society and the private sector; and low carbon growth development strategies piloted in eight districts. These goals will be achieved through land and forest governance activities, improved forest management and conservation, and private sector involvement and market development. IFACS will support the objectives of key related initiatives in Indonesia, including the Norway-Indonesia REDD+ Partnership, the National Strategy of REDD+, and the development of Low Emission Development Strategies.

**9. Japan International Cooperation Agency** and MOFr began in March 2010 a five-year project on Capacity Building for Restoration of Ecosystems in Conservation Areas. The project aims to strengthen the capacity of relevant stakeholders for ecosystem restoration. Target areas are degraded ecosystems in five national parks in South Sumatera, West Java, Sumba Island, Yogyakarta and Central Java, and East Java. The project is also in discussion with JICA's REDD+ Center of Excellence in Central Kalimantan (REDD+ COE), and has begun to explore synergies for developing an integrated regional MRV system.

**10. UK Climate Change Unit (UKCCU) Indonesia:** In April 2011, UK launched a new program integrating resources from UK DFID and other government departments. The goal of UKCCU Indonesia is to assist Indonesia with meeting its national goals including reducing GHG emissions by 41% by 2020, reducing deforestation and degradation, and moving to a lower-carbon economy that achieves 7% growth. The forestry and REDD+ work of UKCCU Indonesia will build upon DFID's previous Multi-Stakeholder Forestry Programme in Indonesia, a stakeholder-driven effort which aims to curb illegal logging and promote sustainable forestry through: implementation of new legislation on forest tenure; support for small- and medium-scale forest enterprises; creation of incentives including those provided through VPAs; addressing governance failures through measures, such as legislation to combat illegal logging law; and promote integrated development planning and improved access to information. The ADB-GEF projects work on policy reform plans to link with and build on this process.

**11. Global Earth Observation System of Systems (GEOSS) Forest Carbon Tracking Task** (GEO-FCT). **Group oh Earth Observation (**GEO) established GEO-FCT in 2008 to support countries in developing their national MRV systems. The overall goal of the GEO-FCT is to test and compare the use of various observations, models, tools and methodologies, in order to: (i) demonstrate that coordinated Earth Observations, validated by in situ measurements and properly linked to modeling can provide reliable, accurate, consistent and continuous information; and (ii) provide options, advice and guidelines to countries willing to implement national systems. To meet the objectives and ensure suitable end-to-end demonstrations, GEO-FCT has built a cooperating framework, which is progressively involving the scientific and technical community, the space community and countries willing to implement MRV systems for REDD+. From 2008 to 2010 Indonesia participated as one of the first 7 demonstrator countries in the GEO-FCT. In order to build on this process, the project will coordinate with the GEO on data sets, remote sensing methods and technical standards for MRV systems.

**12. Forest and Climate Change Program (FORCLIME)**. The project will build on the accomplishment of the German-assisted FORCLIME project in Malinau District. This project has four components: (i) support the development and implementation of strategic forest plans at the province and district level; (ii) support the development of local readiness strategies for REDD+ activities; (iii) support the development of forest management units and its administrative structures; and (iv) support the communities in the pilot districts to get involved in forest management and REDD+ activities.

**13. WWF initiatives in Indonesian Borneo**. These initiatives are implemented in the Kayan Mentarang National Park and Betung Kerihun Nature Reserve, where WWF actively engaged in scientific research, community-based conservation management, and strengthening of park management. The focus of coordination will be on exchange of data and lessons, complimentation of efforts and resources and increasing efficiency in working with the government and civil society.

**14. Natural Capital Project and Green Business Network (WWF).** WWF's collaborative work builds the critical components needed to develop a green economy in the HoB, from galvanizing the political will and creating the right business climate and incentives for private sector investment, to preparing the case to tap sources of public and private funds for long-term, ecosystem-based projects. This approach aims to establish a Green Economy Partners Forum with up to US$100 million in initial support for HoB conservation and sustainable development priorities. WWF has also launched the *Heart of Borneo Green Business Network (GBN)* – dedicated to collaborating and communicating the information that companies need to build green businesses in the HoB. The GBN 'aims to provide the tools and support to those organizations willing to work towards a sustainable future.' Project PES pilots, where applicable, will be informed by ecosystem valuation occurring within these projects, and linked to ongoing ES mainstreaming within HOB policy and decision making.

**15. GEF-supported initiative in Sabah (Biodiversity in Multiple-Use Forest Landscape)**. This is a UNDP and the International Tropical Timber Organization-supported initiative being undertaken in Pulong Tau National Park in Sarawak. The focus of coordination will include the transborder issues in PA and wildlife protection enforcement.

**16. REDD+ projects in Brunei**. These will be implemented under 2010 agreement of the government of Norway and Indonesia to preserve large tract of forest to reduce emissions from deforestation and land use change.

**17. BIMP-EAGA and Coral Triangle Initiative (CTI)**. The coordination will be through the natural resources cluster. It will focus on updating the regional group on the progress of the HOB being its flagship project and the enhancement of private sector participation in project activities. The coordination with CTI will be on strategies to sharpen the effectiveness of activities with ridge-to-reef impacts. In all these initiatives, there will be close coordination with WWF-HOB Program, which has been coordinating with governments and various stakeholders for transboundary collaboration, establishment of PA network and effectiveness of conservation area management.

Coordination with other REDD+ projects in the Indonesian HOB as listed in Annex J shall also be made to ensure complementation of efforts and exchanges and sharing of lessons and experiences.

## E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING

This project aims to support the sustainable management of forest resources and biodiversity in the Indonesian HOB by strengthening the capacity of the GOI, providing livelihood opportunities to local communities, and applying a sustainable financing system. The baseline project will support national policy development and the revision of the legal framework to effectively engage Indonesia in the sustainable management of its forest resources. It will also support law enforcement at the district level, tri-country dialogue and cooridination with Brunei and Malaysia, REDD+ demonstration projects, and local livelihoods development including income generating activities.

With the addition of the GEF grant support, the project will be able to:

(i) effectively scale-up its support on regulatory reform in order to achieve the revision of the legal framework for sustainable management in Indonesia;

(ii) improve the management effectiveness of the Kayan Mentarang National Park and reduce GHG emissions from forest loss and degradation, covering 1.36 million ha, through the development and implementation of a long-term operational management plan, including the facilitation of boundary delineation and demarcation; capacity building interventions for increasing knowledge, awareness, and skills of local stakeholders and park management, establishing conservation village models; implementation of participatory park enforcement system; participatory monitoring system of park activities; establishment of a database for flagship species; and developing strategies for addressing and resolving trans-border issues on forest resource management;

(iii) catalyze sustainable financing of PAs through the development of PES financing schemes (e.g., payment for the supply of water) and alternative livelihood options and benefit sharing mechanisms linked to the Kayan Mentarang National Park in Malinau and Nunukan, East Kalimantan; forests in Melawi District, West Kalimantan; and forests in the Kapuas Hulu District, West Kalimantan. The work will carefully establish M&E for empirical testing of PES' effectiveness (i.e. its environment and socio-economic impacts) and contributions to HOB decision-making and GEBs. In addition to the development of pilot PES systems, operational guidelines for the implementation of PES financing mechanisms in the HOB will be formulated and up-scaled to generate additional revenues that will help sustain protection, conservation, and development activities in the entire HOB.

(iv) developing MRV system for REDD+ and M&E to track and guide progress of the implementation of the HOB NSPA of Indonesia.

Without GEF intervention, the effectiveness of conservation and protection activities across 32.36% of the Indonesian HOB or some 4.08 million hectares will be diminished, and in particular, GEF supported project interventions in the 1.36 million ha Kayan Mentarang National Park will not be feasible given current funding constraints. This in turn will lead to further forest loss and GHG emissions in the area. At a systems level, the current opportunity to reform the current complex and conflicting legal framework for forest management in the HOB while integratating PES/REDD+ mechanisms will be lost as will the opportunity to instutionalize and coordinate efforts through the HOB NSPA.

## F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:

The primary risks and management strategies during project implementation are as follows:

| Risk identified | Risk level | Mitigation Measures |
|---|---|---|
| The high price of commodities (e.g., minerals, rubber, palm oil, timber) could result in ad hoc development of forests, overriding longer term HOB planning. | Medium-High | The project develops regulatory frameworks and active collaboration between local authorities, indigenous communities, the private sector and technical agencies for improved SFM and biodiversity management. The JFPR project will also be addressing important livelihood and land tenure security issues.<br><br>The risk of conversion of protection forests emphasizes the need for economic instruments to enable the district government to generate revenues from well managed and protected standing forest. The project targets the design and piloting of these economic instruments.<br><br>Private secotor involvement in the project is intended to reduce the risk of encroachment and establish market mechanisms supporting ES, SFM and biodiversity objectives. This will include facilitating policy dialogue bewteen private sector groups such as the Sustainable Palm Oil Roundtable and government authorities on sustainable forest policies and legal reform.<br><br>Also, PA will be delineated through partipation of local stakeholders, and an enforcement system put into operation, with forest lines regularly and jointly monitored. |
| Government ownership of the project and capacity constraints for effective implementation at national and local levels. | Medium | The project development has been coordinated extensively with the Ministry of Forestry (MoFr), who will serve as the Executing Agency and the Coordinating Ministry for Economic Affairs, who serves as the Indonesia Focal Point for Heart of Borneo Working Group. The project has been design through extensive dialogue and consensus building and alignment with national priorities and plans; and each of these agencies have expressed strong commitment to the program and in-kind support has been committed to the project (and the sister project funded by the Japan Fund for Poverty Reduction).<br><br>As EA for the Project, the Directorate General for Forest Protection and Nature Conservation within MOFr will delegate authority to the MOFr Conservation Offices/National Park Offices at the provincial and district levels to manage field level project activities as well as coordinate with the HOB working groups at the provincial and district levels. To support implementation, MoFr will delegate a Project Director, who will be supported by the consultant team, including administrative support from the International Team leader (funded by GEF), the National Deputy Team Leader (funded by ADB) and an Administrative assistant (funded by GEF).<br><br>Additional technical support will be provided by WWF at the local level, focused on strengthening natural resource management capacities in Kayan Mentarang National Park.<br><br>From an administrative perspective, ADB will provide additional training in procurement, contract management and financial management and disbursement in the early implementation stage. The estimated cost of the training support is $294,000 (note, this has not been include yet as |

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| | | co-finance and the amount is not confirmed). |
| Project interventions could breach elements of the complex traditional belief system that underpins the resource use of the indigenous peoples. | Medium | Indigenous communities have actively participated in project design, and will continue to be involved in project work planning and implementation in both PA and adjacent village areas.<br><br>Through their participation, they will shape the interventions and suit the pace of their implementation to their absorptive capacity.<br><br>The project will utilize personnel who are either IPs themselves, or who are accepted by the community and have long worked in the area. Their deep knowledge of the local culture, lessons from past encounters with the local people, and the rapport developed will be useful in addressing any issues or cultural sensitivities that may arise.<br><br>Village livelihood development activities will be community driven. Component 4 of the project will consider appropriate benefit sharing mechanisms for PES. |
| Challenges of government, private sector and community collaboration on biodiversity conservation, PES, SFM and protected area management. | Medium | Project management, institutional and implementation arrangements have been developed securing senior GOI national, regional and local commitments, with clear roles and responsibilities, and regular communication platforms to be established via the project and supporting HOB PA and bufferzone areas and communities.<br><br>The project will reduce conflicts by ensuring wider landscape stakeholder inputs to design and implementation (e.g. PES, PA management, SFM/REDD+ pilots,) to integrate and balance multiple objectives. Participatory processes and engagement of local partners and community organizations in the preparation of activity work plans will be undertaken by the project.<br><br>*Private sector involvement will be carefully screened to identify those committed to sustainable development and to avoid any reputational or financial risks. This will be done through the development of PES business case scenarios, which will be ranked according to selection criteria including: public track record, credibility, commitment to sustainability and local community economic, environment and social rights, etc. Subject to screening, it is proposed to work through organizations already involved in industry associations such as the Roundtable on Sustainable Palm Oil (RSPO) and the Green Business Network (supported by WWF); and the Indonesian Mining Association and Indonesian Trade Chamber (KADIN) who are involved in a Partnership on Sustainable Development in Mining Activities. This will assist in identifying organization with demonstrated commitment to sustainability (or are strongly interested in moving in that direction.* Wide landscape stakeholder inputs will also be sought in the development of PES, and PES monitoring in the two implementation phase pilots, as well as the constituency of regulators, investors, buyers and consumers built will help to ensure |

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| | | corporate responsibility, ecologically sound flows and sustainable natural resource use. Consultant resources have also been allocated to address potential risks in this regard (e.g. with additional time given and roles further clarified between the national Sustainable Finance/PES; Financial Specialist, and Private-Public Sector Specialist). |
| Landscape scale coordination where there are communication limitations and site accessibility issues. | Medium | Four measures mitigate this risk:<br><br>One is to have site-based personnel who can operate in the field with a high level of autonomy.<br><br>Second is to schedule all critical activities requiring travel to and from the site during the dry season. These include the conduct of baseline survey and the design of interventions, which may require the field presence of consultants.<br><br>The third is that project design has sufficiently accounted for transportation costs.<br><br>The fourth mitigation is achieved through project management organization. This will involve a hub structure, where the Project Management Officer/Team Leader will base day-to-day management and coordination. His/her functions will include the following: (i) standard setting in field operations; (ii) selected technical and management assistance to field personnel; (iii) project link to stakeholders outside the project sites; and (iv) monitoring of field operations. These functions and detailed implementation planning/reporting will support operations of remotely based site personnel and keep the project on track. |
| Climate change impacts | Low | Project efforts to protect healthy natural forest ecosystems will generate climate resilience co-benefits. Addressed through project adaptive PA management, integrated landscape management planning, LULUCF, etc. MRV and biodiversity monitoring within PA and species management plans will track potential impacts of climate change on key species and ecosystems. |
| Duplication of project efforts re: SFM and biodiversity conservation. | Low | Project design; inception meetings; working planning and implementation; harmonized updates provided through regional and national focal points, provincial management units and ongoing consultation with project stakeholders will minimize any potential overlap. |

## G. EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN

The GEF fund of $2,527,273 will be complemented by $6.45 million co-financing, which implies that the project is effective in leveraging co-financing from various sources registering an average ratio of approximately 1:2.5., additional financial resources are also expected to be leveraged through project implementation, which would bring the co-finance ration at project end to about 1:9.2. Details of this leveraged financial assistance are as follows:

1. **Climate Change Fund (CCF), $1.25 million.** The CCF will be used to establish REDD+ demonstration sites[54] in two districts in West Kalimantan, where the proposed project will be implemented. The National REDD Strategy in Indonesia has identified two demonstration activities, namely: (i) enhanced PAs to represent different bio-socio-geographical conditions; and (ii) enhanced capacity of local communities, including indigenous peoples' communities, for forest management through REDD+ activities. The CCF will support the REDD+ demonstration activities involving communities in two PAs and protection forests in the proposed project sites. These community level activities will complement and inform activities at the national, provincial, and district local government level, which will be financed under GEF.

2. **Regional Cooperation and Integration Fund (RCIF), $0.7 million.** RCIF will finance the identification of potential investments for possible funding through the FIP. Using the results of CCF- and GEF-financed activities, investment areas based on demonstrated feasibility and degree of contribution to biodiversity conservation, carbon absorption, household income, and community welfare will be pinpointed. The activities proposed for FIP investment may include the replication of pilot initiatives in other sites, expansion of geographic coverage, or the introduction of innovations that will enhance REDD+ impacts. Through complementation of activities funded by these two other sources, GEF funds will increase incremental impacts on biodiversity and climate change mitigation and sustainability of results.

3. **Japan Fund for Poverty Reduction (JFPR), $2.0 million.** JFPR will support the livelihood component of the project and will work closely with 13 villages that are located within the project site. Specifically, the JFPR-funded project component will raise the standard of living of the Dayaks by strengthening their income-generating capacity and investing in human development. Such investment is seen as the key sustainable strategy for poverty reduction because capacity at the level of the individual, household, community, and government as well as the natural environment will be improved. Intervention to be applied are: (i) enhance the protection of the production area through improved security of tenure, supportive environment to formal and customary laws, and improved enforcement capacity to prevent displacement and encroachment; (ii) upgrade the production and marketing technology, management, and facilities to increase the added value of products; (iii) gear up knowledge and skills for improved technology, management, and facilities; (iv) improve the legal and institutional environment to play a more supportive role in production and marketing; and (v) establish a community fund generation and management mechanism to ensure that increased income is invested in human development.

4. In addition to the above grants:
   - **WWF-Indonesia committed to provide in-kind co-financing of $2.0 million.** The GEF project is closely aligned with the Indonesia Strategic Plan of Action for HOB, particularly in contributing to the sustainable use of biodiversity by strengthening the management capacity of the GOI on natural resource management. This objective 'mirrors WWF's goal and vision for HOB.' (Please see Annex 7).
   - The **Government of Indonesia has agreed to provide a counterpart fund/in-kind contribution of $0.5 million**. (Please refer to *Letter of No Objection and Co-finance commitment,* Annex 6).

**Additional financial leverage during project implementation**

In addition to the above listed co-finance sources the project also expects to leverage additional financial resources during implementation. This includes support from the private sector, which will be tapped to partner in the implementation of PES schemes. Further, funding from the Forest Investment Program under the Climate Investment Funds is now being prepared by ADB in cooperation with the World Bank and the IFC. The ADB portion of the FIP funds is expected to be about $17 million and will be processed by ADB in early 2013. This funding will directly support the scale up of Component 2. During project implementation ADB will also provide a training clinic to the executing and implementing agencies on project management (e.g., procurement, disbursement and fund flow). The estimated cost of the training support is $294,000.

The project cost will be minor compared to the expected results in terms of global benefits, such as biodiversity conservation, forest protection, ecosystem services and livelihood opportunities, and carbon storage generated. Cost-effectiveness will also be seen in the more balanced protection effort that will be pursued in the entire HOB. GEF-financed activities will complement efforts made in Malaysia and Brunei with similar intentions. The impact

[54] These REDD+ demo areas will be developed later into full-blown pilot sites to be funded under FIP.

of these efforts will be derailed if there will be no complementation and harmonization of efforts between and among the three HOB countries. The result will be loss of the global benefits that this ecoregion has generated. On the local scale, the environmental disasters that will be avoided, environmental goods and services that will be produced, environmental flows that will nurture the rest of the island and its surrounding marine area will be translated to quality-of life-improvement, which will be more costly to attain through direct intervention. Furthermore, cost savings will be achieved through the proposed project's use of national and local institutional structures in implementation management. These structures include the national and local HOB working groups, park organization, NGO and industry groups, which will assist in decision-making, information collection, linking and collaboration, and implementation of ground activities. MOFr, in coordination with the HOB Technical Working, will be the main structure for institutitonal sustainability.

Additionally, the project will ensure cost-effectiveness by promoting ownership and implementation at the local level. This approach will reduce costs to achieve expected objectives and will increase chances of sustainability once the project terminates. Experiences from past development projects involving local communities in partnerships to manage natural resources (co-management or CDD to share or devolve management responsibility, costs and benefits) has shown effective results because local people often depend highly on natural resources for their livelihoods and protecting them is in their strongest interest.

## PART III: INSTITUTIONAL COORDINATION AND SUPPORT

### A. INSTITUTIONAL ARRANGEMENT:

ADB is the only GEF Agency implementing the project.

### B. PROJECT IMPLEMENTATION ARRANGEMENT:

**Executing and implementing agencies.** The Directorate of Environmental Services of Conservation Areas and Protection Forest of the MOFr will be the executing agency for the project. It will delegate authority to the Ministry of Forestry Conservation Offices/National Park Offices at the provincial and district levels to manage the field level project activities as well as in coordinating with the HOB working groups at the local levels. Universities, NGOs, private institutions, and companies will be engaged by the project management office (PMO) to carry out specific studies or activities.

**Project management.** The PMO to be established at the Directorate of Environmental Services of Conservation Areas and Protection Forest of the MOFr will be composed of counterpart government professional staff, support staff services, and the project management consultants. MOFr will support a project director (national) with overall responsibility for the project. The PMO will establish linkages with the HOB National Working Group and liaise with other relevant units and/or offices of ADB, in particular the Indonesia Resident Mission and concerned focal points in the Regional and Sustainable Development and Southeast Asia Departments. It will coordinate, manage, supervise, and implement project activities through relevant government agencies in each of the four districts to be covered by the project. A Team leader (international) and deputy team leader (national) will support monthly, annual and recurrent work planning, reporting and the coordination of on-the ground project activities. A project administration assistant, funded by the GEF, will provide clerical, logistic and accounting support.

## PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

Further clarifications have been made since the PIF as regards specific activities, targets, and indicators recommended by the HOB authorities and stakeholders during consultation, and verified and substantiated during field visits. Nevertheless, the project's outcomes supporting HOB strategic framework and policy improvements, more effective PA management, sustainable livelihoods and sustainable financing mechanisms remain aligned at the site level and conform to component activities that were approved within the PIF.

Some of the more notable PIF revisions include:

- Component 1 in PIF, Policy and Institution, was expanded to focus on strengthening of enabling mechanisms (that includes forest and PA/biodiversity policies and institutions). In view of this, PIF Component 3 (PA management) was made part of Component 1 in the CEO Endorsement project document. This was deemed necessary since policies and institutions for sustainable forest and biodiversity management directly impact effectiveness of PA management at the site level. The whole gamut of PA and forest management systems would require a substantial amount of policy reviews, revisions, and formulation, as well as institution building to make them work efficiently and sustainably.
- Component 4 in the PIF (sustainable livelihoods) remains Component 4 in the CEO endorsement, but has been developed further to target improved livelihood practices of project area indigenous communities, and linked to project co-finance under the JFPR sister project.
- The rest of project components in the PIF (i.e., management of LULUCF [Component 2]), sustainable financing (PES) mechanism (Component 5), and project management (Component 6) were retained and strengthened, to become Components 2, 3 and 5, respectively within this CEO Endorsement document.

Additional revisions since the time of the PIF's approval include:

(i) **GEF-4 Strategic Program**. The project's framework and focus generally remain the same. The project has per GEF advice, however, refined and simplified the links with the GEF Strategic Program to concentrate on SP1, SP2 and LD/TFA-SP2. The new strategic program reflects a more targeted project with better-defined landscape interventions and more holistic considerations of project catalytic effects.

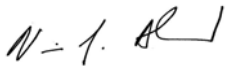
(ii) **Livelihoods**. Interventions re: household-based livelihood improvements in the project sites will be undertaken via the JFPR-funded project, and will remain linked to the spatial and thematic focus of the proposed project;

(iii) **PES**. Private industry operating in production sectors may be involved in sustainable financing (PES) schemes. Following selection criterion, assessment and prioritization of PES business case models, if/where appropriate companies operating within production sectors in project sites and dependent on HOB natural resources may be engaged in project PES frameworks; and

(iv) **Project Financing**. A reduction in project financing in PIF, from $12.527 million to $8.977 million, is reflected in the CEO Endorsement document. While no additional confirmed financing is avaialble at this time, funding for the project is expected to be increased by a further $17 million from the FIP in 2013. When approved, the FIP funding will be integrated with the baseline project and it is expected to focus on scaling up REDD+ Central and West Kalimantan. In addition, project sustainable financing mechanisms (e.g. REDD+, PES) will contribute to project outcomes. Further commitments supporting project pilots will take place during project inception and re-confirmation of project targets, a practical examination of emerging opportunities and development of project annual work plans..

## PART V: AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.

| Agency Coordinator, Agency name | Signature | Date *(Month, day, year)* | Project Contact Person | Telephone | Email Address |
|---|---|---|---|---|---|
| Nessim Ahmad Director, Environment and Safeguards concurrently Practice Leader (Environment) Asian Development Bank |  | August 17, 2012 | Pavit Ramachandran Natural Resources and Agriculture Economist | +632 632 5054 | pramachandran@adb.org |

## ANNEX A: DESIGN AND MONITORING FRAMEWORK

| Design Summary | Performance Targets and Indicators with Baselines | Data Sources and Reporting Mechanisms | Assumptions and Risks |
|---|---|---|---|
| **Impact**<br>Sustainable use of forest resources in the HOB Indonesia | **By 2022 from baseline 2012:**<br>2% increase in forest cover<br><br>14% increase in carbon sequestration capacity<br><br>1.2% increase in the gross domestic product of villages in protected areas | Aerial photos and/or satellite images from the Ministry of Forestry<br><br>National, provincial and district reports<br><br>Land use, land-use change and forestry tracking tool reports<br><br>National, provincial, and district census and statistics reports/ publications | **Assumptions**<br>The Government of Indonesia and partner institutions remain committed in implementing the HOB National Strategic Plan of Action<br>**Risk**<br>Possible change in the priority thrusts and programs of the government |
| **Outcome**<br>Improved management of forest resources and biodiversity in four districts in HOB Indonesia | **By 2015 from baseline 2012:**<br>2% decrease in forest loss<br><br>5% reduction in incidence of wildlife and biodiversity poaching (flagship species: rhino, orangutan, and pygmy elephant) | GEF biodiversity tracking tools report<br><br>Provincial and district agencies reports on status of forestry<br><br>Consultants' reports<br><br>GEF biodiversity tracking tools reports<br><br>Provincial and district agencies reports on status of biodiversity<br><br>Consultants' reports | **Assumptions**<br>Forest protection and biodiversity conservation programs and activities by national and local governments are strengthened and fully implemented<br>**Risks**<br>Poor compliance and/or non-adoption of forestry and biodiversity policies and programs by concerned private sector and local stakeholders |
| **Outputs**<br>**1. Strengthened policies and institutions for sustainable forest and biodiversity management** | **By 2015 from baseline 2012:**<br>Draft national policy and institutional reform agenda for forest resource and protected area management<br><br>6% increase in effective area of habitat of flagship species in Kayan Mentarang National Park<br><br>Four (one each per district) participatory patrol units established in the Project four districts | Provincial and district agencies reports<br><br>GEF-ADB review and evaluation reports<br><br>Consultants' reports<br><br>GEF-ADB review and evaluation reports and biodiversity tracking tools<br><br>Consultants' reports<br><br>Provincial and district agencies reports<br><br>Consultants' reports | **Assumptions**<br>The Government translates lessons and best practices derived from REDD+ demonstration sites into relevant policies and institutional capability programs.<br>**Risks**<br>Irrelevant policies and institutional strengthening programs are formulated due to political intervention |
| **2. Improved land use and forestry practices** | Four REDD+ demonstration projects on climate change mitigation showcased in Kayan Mentarang National Park (two sites) and one each in Melawi and Kapuas Hulu districts | Provincial and district agencies reports<br><br>GEF-ADB review and evaluation reports<br><br>Consultants' reports | **Assumptions**<br>Local government, park management authorities, and local communities are willing to engage in the implementation of REDD+ |

| Design Summary | Performance Targets and Indicators with Baselines | Data Sources and Reporting Mechanisms | Assumptions and Risks |
|---|---|---|---|
| | 3% reduction in Illegal logging activities | GEF-ADB review and evaluation reports<br>GEF land use, land-use change and forestry tracking tool<br>Consultants' reports | demonstration projects.<br>**Risks**<br>Inadequate support from local communities and government local/district offices |
| **3. Potential PES/sustainable financing schemes for forest and biodiversity management** | Four business case scenarios developed supporting implementation of two PES financing mechanisms.<br>PES guideline manual developed to support national and eco-region PES expansion.<br>5% increase in income of local Project cooperators (environmental services providers), where at least 30% of them are women | Provincial and district agencies reports<br>GEF-ADB review and evaluation reports<br>Consultants' reports<br>PES manual.<br>Provincial and district agencies reports<br>GEF-ADB review and evaluation reports<br>Consultants' reports | **Assumptions**<br>The environmental services buyers and sellers in the PES schemes remain active in the entire pilot testing period<br>**Risks**<br>Private sector and local communities unwillingness to participate in the Project |
| **4. Effective project management** | Implementation of Project activities and corresponding disbursement and utilization of project funds are as programmed over the period 2012–2015<br>One monitoring, reporting, and verification system for the HOB Indonesia<br>Two knowledge products (one each for REDD+ preparedness and PES schemes) disseminated through national, regional, and global knowledge networks | Provincial and district agencies reports<br>GEF-ADB review and evaluation reports<br>Consultants' reports<br>- do -<br>- do - | **Assumptions**<br>Counterpart technical staff to the project are provided by the government<br>**Risks**<br>Fast turnover of counterpart technical staff due to either resignation, promotion or assignment to other government and/or private offices |

**Activities with Milestones**

1. **Output 1: Strengthened policy and institutions for sustainable forest and biodiversity management**

1.1 Formulate policy and institutional reform agenda (Commence by Month 6; completed by Month 36)

1.2 Conduct at least one tri-country roundtable dialogue among Brunei Darussalam, Malaysia, and Indonesia each year (Commence by Month 6; completed by Month 30)

1.3 Conduct a training program and follow-up learning activities (Commence by Month 6; completed by Month 30)

1.4 Support the implementation of the Kayan Mentarang National Park management plan (Commence by Month 6; completed by Month 36)

1.5 Improve the mechanisms and procedures to strengthen ground level cooperation and enforcement coordination in support of the HOB regional program

**Inputs**

**CCF and RCIF: $1.950 million**

| **Item** | **Amount** ($'000) |
|---|---|
| Consultants | |
| International | 566.80 |
| Local | 512.70 |
| International and local travel | 68.50 |
| Reports and communication | 78.00 |
| Supplies and materials | 17.03 |
| Equipment | 96.50 |
| Training, seminars, and conferences | 20.00 |
| Surveys | 90.30 |
| Miscellaneous administrative | 398.79 |

| Activities with Milestones | Inputs |
|---|---|
| (Commence my Month 6; completed by Month 36). | and support costs |
| **2. Output 2: Improved land use and forestry management** | Representative for contract negotiations 6.00 |
| 2.1 Establish four REDD+ demonstration sites (Commence by Month 3; completed by Month 36) | Contingencies 95.38 |
| 2.2 Identify potential investments for possible Forest Investment Program funding (Commence by Month 6; completed by Month 36) | **GEF: $2.527 million** |
| **3. Output 3: Potential PES/sustainable financing schemes for forest and biodiversity management** | **Item** **Amount** ($'000) |
| 3.1 Conduct in-depth supply chain studies of four industries (i.e., palm oil, tourism, mining, and rubber) as basis for design and pilot of four PES financing mechanisms (Commence by Month 3; completed by Month 6) | Consultants<br>International 283.65<br>Local 192.00<br>International and local travel 52.00<br>Reports and communications 15.00 |
| 3.2 Design four and pilot two PES financing mechanisms to support the HOB; lessons learned and best practices are documented. (Commence by Month 6; completed by Month 36) | Supplies and materials 243.65<br>Equipment 35.00<br>Training, seminars, and conferences 418.71 |
| **4. Output 4: Effective project management** | Surveys 1,159.58 |
| 4.1 Establish a project management office and three project implementation units (Commence by Month 1; completed by Month 36) | Miscellaneous administrative and support costs<br>Representative for contract negotiations 3.00<br>Contingencies 124.93 |
| 4.2 Conduct in-country clinics (Commence by Month 1; completed by Month 6) | |
| 4.3 Create an effective monitoring, reporting, and verification system (Commence by Month 1; completed by Month 36) | |
| **4.4** Capture and disseminate Project knowledge and lessons through national, regional, and global knowledge networks (Commence by Month 6; completed by Month 36) | |

ADB = Asian Development Bank; CCF = Climate Change Fund, GEF = Global Environment Facility; HOB = Heart of Borneo; PES = payment for ecosystem services; REDD+ = reducing emissions from deforestation and forest degradation and carbon stock enhancement, RCIF = Regional Cooperation and Integration Fund.
Source: ADB estimates.

**ANNEX B: RESPONSES TO PROJECT REVIEWS** *(from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF)*

### 1. STAP Screening of the PIF, 20 May 2009

| Screening/Guidance | ADB Response |
|---|---|
| 1. Minor revisions required. | The minor revisions required are already incorporated in the text of the CEO Endorsement/Request document. |
| 2. STAP welcomes this proposal to improve the management of forest resources in Indonesian Borneo through wide range of coordinated initiatives supported by a heavy emphasis on scientific and technical analysis. | Thank you. |
| 3. STAP notes that this resubmission of a project that previously took in the Malaysian part of Borneo. Since forest conservation and sustainable management are potentially affected by complex trans-boundary issues and since the "Heart of Borneo" takes in forest both in Malaysian and Indonesian parts, it is advisable that the new project specifies how it will deal with issues and minimize trans-boundary threats. How will this proposal harmonize with the equivalent projects in Malaysia and Brunei? | Dealing with transboundary issues and the harmonization of projects in three countries will be achieved in three ways: First, these projects are identified to meet the objectives and priorities of the HOB Tri-national Strategic Plan of Action (TSPA). Second, these projects implement the HOB National Strategic Plan of Action (NSPA), which put into operation the TSPA at the country level. Third, the HOB Technical Working Group (TWG) in each country is involved in the implementation and monitoring of these projects. The TWG in the three countries will periodically meet to assess the progress of the implementation of NSPA and TSPA, sharpen the complementation of the national efforts, and agree on collective actions. In particular, the project will sponsor at least one tri-country roundtable dialogue among Brunei Darussalam, Malaysia, and Indonesia each year from 2013–2015 to discuss matter of cooperation and coordination of efforts in pursuing the goals and objectives of TSPA. |
| 4. The Part 2. Project Justification. Subsection A of the PIF requests identification of the expected global environmental benefits. This does not appear to have been considered in the PIF. STAF advises that a MFA project such as this will need impact indicators that reflect GEBs to be delivered in areas such as biodiversity, total system carbon and land degradation. | The project design and monitoring framework contains impact indicators reflecting the GEB to be delivered in the areas of sustainable forest management, biodiversity, and climate change. These indicators are as follows: (i) increase forest cover under protection and conservation regimes by establishing protected areas/national parks and managing existing protection forests; (ii) increase timber production from sustainably managed plantation forest; (iii) reduced $CO_2$ emissions from LULUCF by establishing REDD+ demonstration areas; (iv) capacitating government authorities and stakeholders in forest and biodiversity management, including tri-country authorities; and (v) implementation of sustainable financing scheme through PES and livelihood. |
| 5. In connection with applying suitable impact indicators the project is advised to work with UNEP-GEF Carbon Benefits Project which is developing measuring and monitoring for tracking total system carbon. | Well taken. The implementation of Component 2 of the project will take into consideration and abide by the lessons, guidelines, and protocols developed by the UNEP-GEF Carbon Benefits Project, particularly in the aspect of measuring and monitoring biomass, carbon stock, carbon sequestration, carbon emissions, etc. |
| 6. This is a complex project with a variety of interventions planned including forest certification, payments for environmental services (PES including REDD) and community forest management (CFM). The full project document should refer to STAP's general guidance on Payment for Environmental Services (PES) and the World Bank GEF project 3929, also involving PES and also proposed for forests in the June 2009 Work Program. | The STAP's general guidance on PES and the experience of World Bank GEF Project 3929 were used as reference in the identification of potential PES mechanisms for the HOB. In the course of actual project implementation, further reference to these two relevant documents will be made to ensure that appropriate PES mechanisms are applied. Also, the international and national PES Specialists will be engaged during the implementation of the project to help in the design, pilot testing, and formulation of PES guidelines to be |

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| | adopted later by the Government of Indonesia for HOB management. |
| 7. We draw to ADB's attention STAP's analysis of the Evidence base for Community Forest Management impacts on global environmental benefits which will be available from October 2009. The UNDP GEF project 3443 has also undertaken some analysis of CFM in Indonesia with the full project brief at paragraph 94. "The project has taken into account lessons learned through several existing modes of community-based forest and watershed management in Indonesia. Thus, while work still needs to be done to develop, test and refine models of community-based management in different ecosystems, GEF funds to undertake this work will benefit from the analysis of past lessons, ensuring cost effective model development." The UNDP brief notes that there are few successful examples and some unsuccessful ones." The project will identify, analyze and share lessons learned that might be beneficial in the design and implementation of similar future projects." The full project brief by ADB should not unnecessarily replicate work already funded by the GEF and take advantage of lessons learned though STAP's general study of CFM and UNDP's analysis of CFM Indonesia. | The preparation of CEO Endorsement document took into consideration the lessons of community-based forestry not only in Indonesia but in other countries in Southeast Asia as well. The experience of UNDP GEF Project 3443 in community forest based management was reviewed and its lessons were used in the design of the project. |

## 2. GEF Council Comments

| GEF Council Comments (July 20, 2009) | ADB Responses |
|---|---|
| **Australia**<br>The proposal fits with Indonesia priorities and other activities. However, the proposal is ambitious, aiming to do many things without a great deal of funding. The project objective is very broad – to "ensure effective management of the forest resources and biodiversity" – and entails that any number of activities would be relevant, a large number of which are outlined.<br>Consequently, it is unclear whether the activity is focusing on reducing emissions (REDD), biodiversity conservation or sustainable forest management. If all of these outcomes are sought, there is no clear link between the different areas. All five components are closely interlinked and the proposal would be strengthened by an indication of these links. For example, strengthened institutions (Component 1) are required to improve land use planning and reduced emissions (Component 2) and to secure sustainable financing (Component 5).<br>Of particular interest to the Australian Agency for International Development (AusAID) is the plan to develop a greenhouse gas emission baseline for Indonesian Borneo. AusAID would be very interested in developing a link between this work and similar work undertaken in the bilateral Australian-Indonesian Kalimantan Forests and Climate Partnership (KFCP). KFCP will develop a baseline for a particular site in Central Kalimantan and some of our work could be shared, while the KFCP would benefit from a greater understanding of the baseline for all of Borneo. | We agree that the objective of the project, as indicated in the PIF, is quite broad and ambitious. In the CEO Endorsement document, this has already been revised to read as follows: To ensure the sustainable management of forest resources and biodiversity in the Indonesian HOB by strengthening the capacity of the GOI, provision of livelihood opportunities to local communities, and application of sustained financing system.<br><br>Under this revised objective, the projected outputs of the project are also scaled down and made concrete and measurable while being confined to specific areas. From the five project components in the PIF (excluding project management), this is now reduced to only three as shown in the CEO Endorsement document, which are more focused and well-integrated. The new project components are as follows: Component 1, Strengthening Enabling Environment (Policy and Institutions) for Sustainable Forest Management; Component 2, Management of Land use, Land use Change, and Forestry, and Component 3, Sustainable (PES) Financing Mechanism.<br><br>The projected outputs of the project are made mutually reinforcing. For instance, the strengthening of policy and institutional environment and sustainable financing are geared to better attain the |

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| | improvement of the management of protected areas and protection forest. The stronger link among the outputs is envisioned to address better the triple concerns on emission reduction, biodiversity conservations, and sustainable forest management.<br><br>The project proposes to undertake carbon accounting for its work areas to measure its result in emission reduction and sequestration but not for the whole Indonesia Borneo. The collaboration between the project and KFCP on this aspect in terms of the methods to be used, data sharing and application of result in field activities will certainly be welcomed. |
| **Germany**<br>The project proposal is supported in general but further amendments concerning donor coordination is needed.<br>Germany already supports a programme in Indonesia "Forest and Climate change". One of its components also aims to improve sustainable resource management, nature protection and the situation of local livelihoods in the Heart of Borneo-area. The project proposal under section "E" does not make any reference to other initiatives by bilateral donors to ensure coherence, to make use of synergies and to avoid duplication of activities. | The CEO Endorsement document has provided an inventory of these initiatives, including the GIZ-assisted FORCLIME. The mechanism for the proposed GEF supported project to coordinate with existing projects including the FORCLIME is also described. Apart from the mutual consultations among the managers of the projects, the TWG is expected to manage the coherence of HOB interventions. |
| **France**<br>The project aims to support the biodiversity protection of the forest ecosystems in Indonesia. The expected outcomes are the strengthening of the institutional framework, the support to the incentive mechanisms (REDD, Certification) and the protection of specific threatened ecosystems.<br>**Opinion: Favorable.** | Thank you very much for the favorable response. |

### 3. GEFSEC Reviews

| GEFSEC Comments (December 17, 2009) | ADB Response |
|---|---|
| ***Are proposed activities for project preparation appropriate?***<br>Kind reminder that the following activities are not eligible for GEF funding as they fall under the responsibility of the government or the private sector:<br><br>1. Activity 2: environmental and social assessments fall under the responsibility of the government.<br>2. Activity 2: Certification for the 10 forest concessions fall under the responsibility of the government or the private sector as relevant. Certification has been sponsored in Indonesia with assistance of the EU and WWF over the last decades with models put into practice.<br>3. Activity 4: the output of the $50,000 investment should be a strategy versus a report on initial discussions on partnership strategy.<br>4. Activity 5: Please confirm in the PPG request that the ADB TA paper will be funded by co-financing. | The proposed PPG activities have been revised and are now focused on the following:<br>1. Activity 1: Assessment of relevant regional, national and local (provincial, district) policies. *(This addresses Component 1 of PIF)*. **NOTE: same as in the old PPG**<br>2. Activity 2: Assessment of land-use and forestry related activities. *(This addresses Component 2 of PIF)*.<br>3. Activity 3: Economic analysis of forest management practices, livelihood, and other sustainable financing mechanisms. (*This is where the PES will come in, but focusing more on forestry and other natural resources-based livelihood opportunities. This activity addresses Components 4 and 5 of PIF*).<br>4. Activity 4: Initial PA planning and management (*for Component 3 of PIF*).<br>5. Activity 5: Documentation preparation. **NOTE: same as in the old PPG. A sentence confirming that the project will be funded under co-financing is inserted in the text.** |
| *Is itemized budget justified?* | The project staffing (i.e., composition of the consultants) is revised based on three considerations: (i) change in the |

| GEFSEC Comments (December 17, 2009) | ADB Response |
|---|---|
| Please note that the ratio of GEF funding of international to national consultants is high (5.25). Funding of all national consultants by GEF might be warranted to consider. | scope of PPG's activities that necessitated the change in the required number of consultants and their expertise; (ii) availability of local experts in Indonesia found out after the mission; and (iii) greater cost efficiency in delivering the outputs without undermining the PPG's quality.<br><br>The change in composition of the consultants resulted in a more acceptable ratio of consultants' (international versus national) rates which is now almost 1:1. |
| *Is the Consultant cost reasonable*<br><br>High ratio of international to national consultants: 5.25 | Already addressed as shown in the new computation in the revised PPG and as explained above. |
| *On PPG Recommendation*<br><br>PPG will be recommended pending on the satisfactory resolution of the above non eligible GEF activities and high international/national consultants ratio. | See above response. |

| Comments from GEFSEC (July 15, 2010) | ADB Response |
|---|---|
| 1. **PPG Recommendation**. CEO approved the PPG. Kindly note that the above mentioned PPG cannot be approved under GEF-4 as previously communicated to all the OFPs and Agencies. GEF-5 approvals will be effected after the replenishment resolution is adopted. | Noted.<br><br>Arrangements are now underway for the PPG cost, which has been technically approved by GEFSEC, to be charged under the GEF-5 STAR allocation. |

**Responses to GEFSEC review on the CEO endorsement request for the Indonesia Sustainable Forest and Biodiversity Management in Borneo (GEFSEC Project ID: 3435) provided on 11 October 2011**

| Question | GEFSEC Comment | ADB Responses |
|---|---|---|
| 9. Is the project design sound, its framework consistent & sufficiently clear (in particular for the outputs)? | 1. Please present in the project document specific results of PPG and how they are factored in the project. Whereas Annex D shows completion of activities, it does not summarize crucial results that should be weaved in the project document. | Although requested, PPG funding has not been endorsed by the GEF Operational Focal Point or the GEF SEC at this time. The reason for this is that the PPG funds previously endorsed during GEF-4 are no longer available, and requested funds from Indonesia's GEF-5 STAR have not yet been endorsed.<br><br>Project preparation activities have therefore been advanced by ADB (See Table C) on the assumption that the PPG funding from GEF-5 would ultimately be endorsed. This issue is still pending at the time of this submission.<br><br>Preparation activities have included:<br><br>(i) assessment of policies and government capacities, (ii) evaluations of land-use and forestry activities, and (iii) economic analyses for forest management practices, (iv) livelihoods and sustainable financing mechanism, (v) initial protected area planning and management.<br><br>These studies were successfully completed and provided crucial inputs to the project preparation and design of |

| Question | GEFSEC Comment | ADB Responses |
|---|---|---|
| | | implementation support to promote sustainable forest management and biodiversity conservation in the Heart of Borneo (HOB) in Indonesia, and in responding to the National Strategic Plan of Action (NSPA) for the HOB Initiative.<br><br>The key results of the are further described in Annex D of the CEO endorsement form. |
| | 2. The private sector is strikingly lacking as a partner. Their involvement appears essential. Please explain. | During project preparation, collaboration with various private sector entities have been assessed and discussed. In particular there will be a significant role in the implementation of the payment for environmental services (PES) component of the Project. As detailed in Annex I, participation of local water companies, rubber plantation owners and factories, oil palm plantations and processing plants, coal mining companies, and tourism operators and entrepreneurs, who are recipients of environmental services, will be engaged in the implementation of PES. Involvement of these individuals and private companies is crucial in the opening of new markets for environmental goods and services and in scaling up PES investments in other parts of HOB. This additional information is also incorporated in Page 11 of the CEO document. |
| | 3. This project fits in with the range of different projects that are ongoing around HOB – e.g. the WWF and TNC executed SFM improvements. There is a lot to be done in this area and it has been dysfunctional for a long time, slowly these projects are helping to fix the different elements. The PA system really only exists on paper so getting conservation actions on the ground is a priority. However it does not clearly specify how dependency on outside assistance will be replaced by a sustainable system. The private sector could have a role here. | The protected area network in Kalimantan currently exists on paper but severely lacks the financial resources and technical capacity to be operationalized at the local level. The Project will help the government set up a robust and strategic sustainable system for forest resources management in the HOB, which will be supported by three potential sources of financing after project closure, namely government, market, and donor sources.<br><br>The study on sustainable financial mechanisms conducted during project preparation provides a good basis for the development of sustainable financial mechanisms (REDD+ and PES) that will be developed during project implementation and where successful can be used as models for up-scaling. Furthermore, pilot results will increase income generation activities and livelihood opportunities in ways that contribute to the sustainably management and utilization of the forest ecosystem, thus reducing land conversion and incremental forest degradation.<br><br>As mentioned above, sources of financing can include licenses and royalty fees (e.g., rubber processing, mining, palm oil); reforestation fund; reclamation fund; private sector contribution through corporate social and environment responsibility; and special allocation funds.<br><br>Additionally, the Project will conduct extensive training to build the necessary capacity, especially at local level, to continue efforts and promote sustainable resources management after the Project is completed. Sustainable financing schemes developed under the Project will ensure the continuation and scaling up of on the ground activities, such as patrolling for law enforcement in parks, and scaling-up of demonstration projects (such as reducing emissions from |

| Question | GEFSEC Comment | ADB Responses |
|---|---|---|
| | | deforestation and forest degradation [REDD] or revenue-generating initiatives). |
| | 4. The project components are a good fit, however working out what GEF gets for its money in terms of ha of PAs improved, restoration and tCO2e is not easy and you have to do a lot of page turning to get the figures. Please summarize clearly in text or table format under either section A. proposed project or in incremental reasoning (section 2E). | Section 2E of the CEO document (incremental reasoning) is now revised. |
| | 5. The reduction of illegal logging by 3%—that still means 97% of IL is ongoing in the project area—that is not much to cheer about; but GEF is not funding that component. Is there anything the GEF project can achieve in that regard? | The project target has been established based on the project preparation studies and consultations with Ministry of Forestry and local agencies. These indicated that the proposed targets are realistic given the project funding, time duration and actual condition in the sites. With the addition of an expected further $18 million in resources from the Forest Investment Program in 2013 the project scope is however expected to be significantly increased, with a focus on up-scaling the first phase of REDD+ pilots. With this in mind, it is planned that the project targets will be further reviewed at project inception and in light of the new FIP resources.<br><br>With respect to GEF funding, planned activities under components 1.1 and 1.2 will support local institutional and capability building programs and for establishing local enforcement systems that will further strengthen local efforts in reducing cases of illegal logging. Overtime, and as a result of the alternative livelihood and PES mechanisms under component 3.1, the project impact is expected to be further increased. |
| | 6. It is not totally clear on how the PES would work—what mechanism is being put in place to extract money out of the rubber and palm oil plantations for water supplies? Please specify. | Details of the PES schemes are now described in Annex I.<br><br>The menu of PES schemes to be tried are: (i) improving rubber processing and protection of forests; (ii) restoration of degraded lands and maintenance of forest cover; (iii) protection of landscape for biodiversity conservation; (iv) supply of water to oil palm plantations and coal mining plants; and (v) ecotourism development. |
| | 7. There is not a clear picture of what area of the 3 districts will be covered by the project and for which activities. Please attach a map with specific project locations and activities. So far only the CO2 sequestration aspects are clear in % of coverage and amount of tons sequestered. | The project areas are summarized below. Specific project sites, particularly for PES and REDD+, are also now incorporated in the CEO document. Likewise, the location maps are included in the descriptions of the REDD+ and PES schemes as shown in Annexes H and I, respectively.<br><br>Component 1:<br>• Support for HOB tri-lateral process (regional – 3 countries)<br>• Formulation draft national policy guidelines (National)<br>• local policies and management regulations (Central and West Kalimantan<br>• Support for implementation of Kayan Mentarang NP operational plan (whole area – 1.36 million ha) |

| Question | GEFSEC Comment | ADB Responses |
|---|---|---|
| | | • REDD+ pilots in Kayan Mentarang NP (1000ha)<br><br>Component 2<br>• REDD+ pilots (2 districts in West Kalimantan – 1000ha), with further scale-up being designed through FIP.<br><br>Component 3<br>• PES pilots (4 districts in central and west Kalimantan, but with site selection to be confirmed. Areas under consideration include:<br>o Upper Kapus Hulu Basin, West Kalimantan – Sibau, Mendalam and Kapuas sub-districts)<br>o Melawi District, West Kalimantan<br>o Malinau, East Kalimantan (buffer zone of Kayan Mentarang NP)<br>o Krayan Highlands, Nunukan, East Kalimantan<br><br>Component 4:<br>• MRV systems (national level, with testing in 4 districts in Central and West Kalimantan)<br>• Knowledge and outreach (HOB regional, national and local)<br><br>The criteria used in the selection of the project sites are as follows:(i) strategic location in the HOB in terms of protecting critical environments; (ii) amount of donor assistance; (iii) potential contribution in the reduction of greenhouse gas emissions; (iv) significant benefits to local communities; (v) potential for future investments under the Forest Investment Program,, particularly for REDD+ and PES schemes; and (vi) government and stakeholder commitment to work with the Project. These are incorporated in Page 10 of the CEO document. The final selection of actual project sites, however, will be done during the inception phase where in-depth consultation meetings will be held with concerned communities and stakeholders. |
| | 8. Section A vi and the framework should be updated. Has the proposed $CO_2$ emission baseline (2.3) in HOB not already been set by TNC or others? If not, please justify. | After thorough consultations with concerned agencies, no detailed $CO_2$ emission baseline has been completed for the entire Indonesian HOB. What is available are individual estimates for specific sites. For the project, estimates of $CO_2$ emissions for the identified projects sites at the district level have been prepared (Annex H). These baseline data will be validated and ground truth during the project implementation phase. This will form the basis for the establishment of the REDD+ pilots and MRV systems. |
| | 9. Under project management a monitoring, reporting, and verification (MRV) system will be developed for HOB Indonesia and coordinated at the tri-national level is proposed. In order to avoid duplication, please coordinate W/ The International Group on Earth | It is intended that the preparation of the MRV system will be coordinated with all partners working on REDD+ and forest carbon accounting in Indonesia, as well as those operating globally. In particular further consultations and coordination will be taken through the Indonesia REDD+ taskforce and the HOB Working groups, as well as with groups such as the International Group on Earth Observation Forest Carbon |

| Question | GEFSEC Comment | ADB Responses |
|---|---|---|
| | Observation Forest Carbon Tracking - of which Australia is the national demonstrator partner. | Tracking. As partner efforts are many in Indonesia, a first step in this process will be to rapidly reassess the status at project at actual project commencement, and then establish partnerships with other organizations working in the same field. See also new text on page 4 of the CEO Document and text regarding coordination with other initiatives on page 19. |
| | 10. Please Complete Annex B: while comments on PPG have been addressed, previous comments on CEO endorsement have yet to be included in section 3 of the table: GEFSEC reviews. | Annex B is now updated and completed. ADB Responses to the latest review of GEFSEC (dated 11 Oct. 2011) are likewise appended in the list of previous responses. |
| 11. Is the project consistent and properly coordinated with other related initiatives in the country or in the region? | Some major initiatives are listed. Please, also explain how the initiative is related to Indonesia's activities under the FCPF and UN-REDD Programme.<br><br>As there are plethora of activities by government, donors, and NGOs in the targeted areas, please attach a map with the locations of all interventions and circulate it to all HOB partners, with cc to GEF, to ensure that there is no duplication. Please update section D accordingly, including with TNC, GIZ, GEOFCT, and relevant CTI activities and results and provide a coordination action table/plan with all partners. | An expanded discussion of linkages with a broad range of REDD+ initiatives in Indonesia including the FCPF and UNREDD is provided in Part II, Section C (from page 19). A matrix is also provided in Annex J with information on additional REDD+ projects with site level interventions in the project areas.<br><br>At this time a location map of relevant interventions of various agencies, institutions, and organizations in the HOB is not however considered practical, due to the limited availability of site level mapping for many projects. During the project inception phase, ADB will work with other partners to complete mapping as an input into future planning and M&E frameworks. |
| 16. Is the value-added of GEF involvement in the project clearly demonstrated through incremental reasoning? | No. This information is largely lacking. Please, describe in detail under 2e) in the CEO endorsement request how the project would look like without GEF involvement (baseline project). As it is currently described, there would most likely not be any project without GEF financing.<br><br>10/6/2011: please address comments in 9. | The project description has been expanded in the text and the GEF increment is explained further in the relevant section of the form (2F page 22). |
| 17. Is the type of financing provided by GEF, as well as its level of concessionality appropriate? | Most likely. Grant funding mainly for Scientific and technical assistance but also investment seems to be justified. However, under 2d) in the CEO Endorsement Request "Justify the type of financing support provided with the GEF resources" no information/justification has been provided. Please, do so in a revised version. | Without the funding from GEF the management of Kayan Mentarang National Park would continue to be very weak, making it more vulnerable to further illegal logging, encroachment and incremental forest degradation, leading to increased GHG emissions and biodiversity impacts. Furthermore, opportunities to develop sustainable financing mechanisms will not be captured or will be slower to develop, resulting in a continuation of budget constraints for PA management, lost opportunities to improve livelihoods for forest dependent communities, and failure to capture opportunities for dialogue, engagement and financing from the private sector. |
| 18. How would the proposed | This is difficult to assess because the baseline project has not been properly described (see comment no. 16). | The project description has been expanded in the text and the GEF increment is explained in the relevant section of the form (2F page 19). The detailed project activities are presented in |

| Question | GEFSEC Comment | ADB Responses |
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| project outcomes and **global environmental benefits** be affected if GEF does not invest? | | Supplementary Appendix A of the ADB CDTA. GEF financing will contribute to the achievement of the global environment benefits in the area of biodiversity conservation by protecting important species and ecosystems. In particular the GEF funding will directly strengthen the management and protection of Kayan Mentarang National Park, decreasing current forest loss and degradation and reducing the incidence of wildlife poaching. The Park is Indonesia's largest protected rainforest and one of the largest untouched rainforests in Southeast Asia. It is home to rich wildlife, including orang-utans, gibbons and clouded leopards. About 70% of the reserve lies below 1,000 m and contains areas of species-rich lowland dipterocarp forest.<br><br>Without the project, the proposed project sites areas are projected to lose an annual average of 33,274 hectares of forest from 2012 to 2022, causing an estimated 16.8 million tons of carbon dioxide to be released into the atmosphere annually. The area of activity directly resulting from the project is around 1.313 million hectares (Annex G).Investments made during the project's supervised implementation period (3 years) have the potential to directly avoid around 8 million tons of carbon over 20 years through targeting a 2% decrease in forest loss (2,061 hectares) throughout the project period. Lifetime indirect GHG emissions avoided is estimated to be around 52.35 million tCO2e through conservation and enhancement of the remaining 1.309 million hectares of forests in Kayan Mentarang National Park. The target rehabilitation of 2,000 hectares of degraded lands can sequester around 62,674 tCO2e assuming an 80% growth scenario.<br><br>Without GEF involvement, the above-mentioned project activities will not be conducted and only 200ha of degradaed land reforestation will be undertaken. |
| 20. Is the GEF funding level of other cost items (consultants, travel, etc.) appropriate? | Difficult to estimate. No detailed project document has been submitted. Hence, budget tables are largely lacking. Please, submit a detailed project document with more detailed budget tables. | Please refer to Supplementary Appendix A of the ADB CDTA (Section SA B.1), which provides detailed costs per project component. |
| 22. Are the confirmed co-financing amounts adequate for each project component? | Yes. However, overall co-financing has been reduced by 30% since PIF approval. Please explain.<br><br>10/6/2011: Please note that co-financing figures differ in tables A & C. Please adjust. | The reduction in cofinancing was brought about by a reduction in WWF's committed fund from $5 million to $2 million.<br><br>During project implementation it is however expected that an addition $18 million in funding will be leveraged through the Forest Investment Program (FIP). This funding will be directly linked to the currently proposed ADB-GEF project through a planned scope change in 2013 when the FIP funding is expected to be approved. To show this linkage, further information on the FIP and its links to the project have been added to project have been added in Part II, Section C, Page 19 of the GEF CEO Document. The leveraging of the FIP is also now included as an outcome in the project results framework under Component 3. At the time of the FIP approval, total leveraged financing against the $2.5 million from the GEF is expected to be $22.45 million or 1:8.8 (this will include: ADB |

| Question | GEFSEC Comment | ADB Responses |
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| | | Climate Change Fund - $1.25 million; ADB Regional Cooperation and Integration - $0.7 million; WWF - $2 million [parallel funding]; Government of Indonesia - $0.5 million; and FIP - $18 million). Further funding linked to the FIP is also under discussion: Government of Germany (KfW/GIZ), Government of the USA (USAID, Dept. of State, Millennium Challenge Corporation), but cannot be confirmed at this stage.<br><br>In addition, the projects work on PES will seek to leverage private sector's counterpart funding. Five private industries/entrepreneurs were initially identified as funding partners, who are expected "buyers" of environmental services. As the details of PES scheme partnership with identified private sector have yet to be concretized, their funding cannot however be confirmed for the CEO Endorsement document.<br><br>Corresponding changes in financing figures in Part I Tables A & C were already made and these figures are now reconciled. |
| 23. Has the Tracking Tool3 been included with information for all relevant indicators? | Yes<br><br>6 Oct 2011/LH: Please completed a spreadsheet version of the LULUCF tracking tool which is given in Annex G, and send it in.<br><br>Please also provide the BD (Annex F is blank and it is not provided elsewhere) & LD TTs. | The excel version of the LULUCF tracking tool is now attached.<br><br>The BD tracking tool is now attached.<br><br>Regarding the LD tracking tool – this is not considered appropriate for this project. While the project is receiving land degradation (LD) funds ($860,000), this was provided as funding under the Tropical Forest Account (TFA) window, which generally aims to reduce deforestation rates in regions of large and mainly intact tropical forest, such as Amazonia, the Congo Basin, and Papua New Guinea/Borneo. The main intention is to fill the gap in the existing toolbox of GEF incentives to intensify the focus on reducing deforestation. This is highly consistent with the design of the project. In contrast however, the GEF-4 LD Strategy was to up-scale sustainable land management interventions to combat land degradation and desertification. LD funds principally focuses on production systems—agricultural, rangeland, and forest ecosystems—where links to human livelihoods, especially farming and pastoral communities are crucial. These are not the main concern of this HOB project. Hence, the preparation of LD tracking tool for the project is not considered appropriate. Furthermore, at the time of the CEO Endorsement preparation, the GEF-5 LD tracking tools did not exist, and thus resources needed to prepare them were not set-s-side. If absolutely required by the GEF, then they could be prepared at project start-up, to avoid project commencement delay, which would threaten project viability. |

**ADB Responses to the February 29, 2012 Comments of the GEF Secretariat in the HOB-CEO Project Document**

| Review Criteria | Questions | Secretariat Comments at CEO Endorsement | Remarks |
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| Project Design | 9. Is the project design sound, its framework consistent & sufficiently clear (in particular for the outputs)? | 3. Some additional detail has been provided but only in terms of potential sources. How has the PPG work considered or clarified the likelihood of sourcing license or royalty fees or CSR contributions from the private sector? | The PPG phase examined the current legal arrangements for licenses and royalties paid by various resource users to the government, which are fixed in Indonesian laws. The local government may set the tax rates for such items as vehicle registration and ownership, fuel and water use, quarrying and building development but there is very little leeway under the law to develop new sources. New sources have to be made through national legislation. The process of enacting a legislation particularly on fiscal matters is expected to be complicated and long-drawn.<br><br>Given these constraints, efforts to improve the flow of royalties & taxes from national to local governments have been considered and have been included in the draft FIP Indonesia Forest Investment Plan[55], which includes: (i) a review of fiscal mechanisms between national and sub-national to identify barriers and disincentives to addressing drivers of deforestation and forest degradation; (ii) piloting an incentive scheme that promotes alignment of existing sub-national fiscal transfers with REDD+ objectives while generating socio-environmental co-benefits. ADB will support FIP implementation and FIP funding will be linked to the GEF grant implementation for HOB. Thus the project teams believes that through the synergized implementation of both PIF and GEF HOB support that the use of licensing fees from the private sector can be increased. |
| | | 4. There are some discrepancies between Section B in the Project Framework and Supplementary Appendix A Section B Project Outputs, please ensure these correspond. | Done: See attached revised Supplementary Appendix A. Section B (Project Outputs), particularly the insertion of Activity 4.3 and the adjustment made on the succeeding Activity Output, which was changed from Activity 4.3 to now Activity 4.4. These now correspond with the various activities (under Output 4) listed in Design and Monitoring Framework. |
| | | Some modifications /additions are needed to Annex H documentation and the CC tracking tool (LH):<br><br>a) In terms of the default | Done. See added notes on p. 52 and revised notes on p. 54. |

[55] Draft for public comments available on http://www.dephut.go.id/files/Draft%20Indonesia%20Forest%20Investment%20Plan.pdf until 18 Mar 2012

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| | | value, please add text noting that the value most used for the calculations is 265 tons/ha biomass converted to CO2 which is 485 or 465 tCO2/ha. | |
| | | b) For the proposed forest/fruit trees site. In Table H.7., it is unclear where the carbon sequestration column came from. If after 5 years, the CO2 equivalent is 14929.56 tCO2e, this is the amount of sequestration after 5 years, not 12478.99 as indicated in the last column. In terms of lifetime direct, one can count the sequestration for 10 years for lifetime direct if it is reasonable that the trees will last the ten years. Since 80% growth is used in Table H8, make Table H.7 the 80% growth table, and drop the last column. In Table H8, there appears to be double counting to include the 80% 2017 row of 11,933. Delete that row, and delete that number from the tracking tool (TT). If I am interpreting these tables incorrectly then please add text to explain. What is now listed as 62,674 in lifetime indirect would be listed in the lifetime direct row. The lifetime indirect would likely be zero according to the information provided. | Recommended changes to Table H.7 and LULUCF TT implemented.<br><br>Carbon sequestration column was computed as:<br><br>Hectares Planted = 2,000<br>X<br>Biomass growth/ha/yr = 3.4<br>X<br>C-stock default value =0.5<br>X<br>CO2 default value = 3.67<br><br>The project team has assessed that through community engagement and management arrangements, improved monitoring and enforcement, and alternative livelihood support (provided by a link grant under the Japan Fund for Poverty Reduction), that it is reasonable to expect non-harvesting of trees planted (legally or illegally) over 10 years.<br><br>Compared to the hardwood species (especially for those that have highly merchantable timber), the mixed fruit tree species are likely to be less under threat since local communities can derive benefits even while the trees are standing. (See comment box on p.53, Table H.6).<br><br>A footnote on p. 12 was also added linking institutional arrangements for forest rehabilitation activities with the design of participatory patrol units and PES schemes. |
| | | c) For the projected decrease of 2% deforestation over 3 years (2013-2015) related to Tables H3 and H4, which is the first block in Table H8: as written it appears that the reduced deforestation only occurs in these 3 years. Therefore, the only corresponding reduction in emissions occurs in those 3 years and only 1,001,174 would be recorded in the tracking tool, not the 8,010,000. If the amount of deforestation is reduced by 2% every year through 2022, then this should be clearly | Thank-you, this comment was helpful in providing further guidance on the method for computing lifetime direct post-project emissions avoided. Based on this comment, Table H.8 and LULUCF TT were adjusted accordingly.<br><br>A straight computation for updating the area coverage for of direct emissions avoided (6655 ha) was applied using the projected total area deforested over 10 years, i.e.:<br><br>Total ha. Deforested 10 yrs = 332,742<br>X<br>Target reduction = 2%<br>Area Deforested = 6655,<br><br>See Tables H.3 and H.8, to come up with CO2 |

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| | | described. In that case though, the total reduction in deforestation is 6932.2 ha. | estimates for lifetime direct emissions avoided. |
| | | d) For the middle block of Table H.8. on Lifetime Indirect: Please footnote this block to say it is being assumed that the strengthened policies are fully reducing the assumed average annual forest loss of 0.95%, which is an estimate of loss in the Malinau and Nunukan districts from WWF (2009), to no forest loss. This is calculated through in the first row of Table H.3. | Done. A 15% allowance for uncertainty was built into the estimate for lifetime indirect emissions avoided, relating to the project area within Kayan Mentarang National Park.<br><br>See added footnote 30 on p. 12, edits on p. 17, Table H.8, and footnote 73 on p. 53. |
| | | f) In the text of the last paragraph on page 11 in the CEO endorsement text, add a few sentences of text to explain the underlying assumptions about the 52.35 million tCO2 calculation and make the sentence on the 8 million tons of carbon consistent with the updated TT. Also update the text in the middle of page 16 on carbon estimates if needed. | Done. See p. 11 and p. 16. |
| | | 5. The IL reduction target still appears low but the establishment of participatory patrol units is acknowledged. However there is little detail about how these will function and under what authority they will operate, please explain. | Being a unitary state, the central government exercises all state powers in Indonesia, including the power over forests. The Ministry of Forestry (MOF) mainly exercises this power on behalf of the central government. It categorized forests into four: production forest (allocated for sustainable use); convertible forest (allocated for farms, estate crops and settlement); protection forests (allocated as watershed) and conservation forest (allocated as protected area).<br><br>While the MOF holds to its power over protected forests, it gives concession to corporations, individuals, cooperatives, communities and state enterprises to use and manage production forest. It also granted tenure instruments to individuals and corporate entities to use and manage convertible forests. The obligation to comply to the provisions of concession agreements and tenure instruments rests on the recipient with the MOF providing the oversight. The management of protection forest was devolved to local authorities and with it is the authority to protect it.<br><br>Since patrolling is part of enforcement, which in turn is part of the protection program, concession holders must do it in the production forest just as the local authorities will do it in |

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| | | | the protection forests. In the conservation forest, the function still rests with the MOF. Being converted to non-forest uses, forest patrolling in conversion forest is no longer needed.<br><br>Footnote #31 has been added in page 12 of the CEO document explaining that the participatory patrol units will serve as the main project mechanism for forest protection against illegal logging activities. Detailed arrangements will however be designed and undertaken as part of project implementation through participatory process with local stakeholders (including civil society organizations, media, local communities, and district and provincial governments).<br><br>We also note that different concessioners, local authorities, and the MOF protected area offices have varying capacity for enforcement. To provide appropriate intervention, an enforcement capacity diagnosis has to be made. The diagnosis will cover the following aspects: (i) size of area under protection; (ii) staff size; (iii) staff quality; (iv) equipment and facilities; (v) enforcement management activities; (vi) case handling activities; (vii) outside support; (viii) financing; (ix) local legislations relevant to enforcement; (x) incentives and disincentives; and (xi) community participation.<br><br>The diagnostic results will be presented to stakeholders for review. Together, they will set the enforcement targets and the issues to be addressed to meet these given the diagnostic results. They will subsequently identify the actions and resources needed and formulate an enforcement plan based on the existing capability. Part of the program is an enforcement manual of operation describing the following: (i) enforcement organizational structure and functions; (ii) coordination, communication and reporting; (iii) surveillance and intelligence (including patrolling); (iv) equipment procurement, safekeeping and maintenance; (v) sustainable financing; and (vi) monitoring and evaluation.<br><br>Each participant of the enforcement operation will be trained in performing its role based on a manual of operation. These may include community members who may serve as ground informants and deputized enforcement officers. Part of the training is a dry run through simulated enforcement operation. The simulation exercise may be done twice a year to ensure the synchronization of actions of |

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| | | | participants and to improve the operation based on its recent experiences with actual operation.<br><br>The patrol units will operate under the guidance of concerned officials of the MOF Conservation Offices/National Park Offices at the provincial and district levels, in coordination with local HOB working groups and other relevant national line agencies (e.g., environment, home affairs, police, justice). As mentioned in the CEO document, four patrol units will be established in the project sites (i.e., one each per district). |
| | | 6. Additional information on the PES has been provided. Please explain how STAP guidance on the establishment of PES has been incorporated during PPG. For example in B, E and F the link to improved environmental services is not clear, and appear to be more aligned with provision of tourism services. | As described in Section C (consistency with GEF strategies), PES financing schemes are to explored within a) protected area sustainable use zones, and in b) community forest areas adjacent PA bufferzone. As per the STAP advisory document on PES, the project satisfies two key entry points, namely:<br><br>i) The setting up and piloting of direct payments for ecosystem services, with the rationale being that user payments will be developed to demonstrate and test models that will produce direct shifts in current HOB land use trends and leverage support for further uptake of the models in other areas, and;<br>ii) As a co-financed multiple service strategy, the project will aim to leverage HOB biodiversity considerations by developing programmatic links piggy-backing PES with REDD+ pilots, sustainable use, and benefit sharing. This includes development of best practice in PES and REDD+, and development of project synergies bolstering biodiversity conservation and protection of carbon stocks.<br><br>As described within Section B (consistency with national priorities), the GOI is highly supportive of developing payment for ecosystem pilots at the local and national levels and specifically conserving the HOB. The GOI is aware of current regulatory and market-based shortfalls necessary for PES, and requests assistance to develop successful pilots, demonstration, and replicable design methodology.<br><br>As described within Component 3, four potential PES schemes have been identified in |

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| | | | the PPG phase through GOI and community consultations. In stepped fashion, these will be further evaluated during project implementation, with two models to be fully developed during implementation. The project takes a measured and targeted approach to ensure the basics are in order, resulting in a well targeted PES program. This is done by first conducting an ecosystem service supply chain analysis and 'business case preparation' of the four models. Screening will be undertaken for the ecosystem service itself, ES buyers, payer distribution, potential conflicts, protection incentives, links to REDD+ pilots and other initiatives, and the potential PES models will be evaluated and compared, with the two best targeted and most realistic PES pilots finalized and developed for PES implementation.<br><br>Where appropriate, linkage will be developed to ecosystem valuation work being implemented in the HOB by the WWF Natural Capital Project, as well as more broadly by the GOI led "Green Economy" Initiative. Importantly, project M&E will be developed to track PES indicators including environment and socio-economic impacts generated by PES. This will not only aid in the valuation of the component and GEBs generated, but also serve to inform PES land monitoring and sanctioning systems.<br><br>Notably, the project will also focus on mobilizing resources to piggy-back upon and upscale community focused REDD+ investments and best practice being developed in the project area. Potential up-scaling will also be pursued through linkage with the ADB administered FIP investments. |
| | | Also has the PPG delivered information relating to the likelihood of implementing new tax regimes or the willingness to pay of palm oil and mining concessionaires? | During the PPG phase the team briefly reviewed tax regimes, but the project itself will not support tax reform as this an enormous multi-sectoral task that is beyond the scope of the projects budget and time resources. The tax regime requiring various resource users to pay taxes is already fixed under the Indonesian laws. They pay the following taxes to the national government: income taxes, value added taxes, land and property taxes. Using certain formula, the national government allocates part of the proceeds from these taxes to various local government levels. To the provincial government, they pay the taxes on the following: vehicle registration and ownership transfer, fuel and water exploitation. To the district, they pay quarrying tax, building development tax, piped water distribution tax |

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| | | | and garbage tax among others. Promulgating and implementing a new tax regime requires a national legislation, which entails a complicated and long-drawn process.<br><br>Notwithstanding the above, the PES models will explore opportunities for local communities to be engaged in forest protection activities through payments transfers from the government (from existing taxes) and other forms of payments from oil palm plantation owners, coal mining companies, and related industries.<br><br>Regarding the willingness to pay of palm oil and mining concessionaires, some initial work on this has been undertaken through various past and present projects. For example, Fauna and Flora International has been working with palm oil concessions to forgo converting rainforest areas in West Kalimantan in exchange for share of the revenue generated from the sales of forest carbon credits. With regards to other forms of PES, further specific work with palm oil concessionaires will be undertaken as part of the screening of the 4 initial PES models discussed above (and described in Component 3) |
| Justification for<br>GEF Grant | 20. Is the GEF funding level of other cost items (consultants, travel, etc.) appropriate? | Budget provided in Supplementary Appendix B, Pages 7-11. Can you explain the differences between these figures and those in the Project Framework.<br><br>Consultants fees at $5k/month are in excess of rates typically funded by GEF and should be reduced. | The values presented in Supplementary Appendix B, pages 7-11, provide the details of cost expenditures (by component/activity) on a yearly basis. The cost values as presented in the Project Framework are the major categories of costs which were derived from the detailed component cost tables (presented in Supplementary Appendix B, pages 7-11) for which totals are provided to show how much will be funded by each funding source for each cost category. The values presented in the Project Framework are consistent with values presented in Appendix 2, Cost Estimates and Financing Plan.<br><br>ADB has in place its own policies, procedures and budget cost norms for the selection of consultants, which are guided inter alia by the need for high-quality services, economy and efficiency; competition and transparency. Consulting costs are based upon guidance from ADB's Central Operations Services Office (COSO) who conducts annual reviews of remuneration of experts, market surveys and consultations with other donors such as the World Bank which provides data for setting benchmark rates for budgeting purposes. These rates vary according to sector, expertise required, country and type of recruitment |

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| | | | process. The consultant costs in the ADB project budget are therefore deemed a good reflection of market conditions, and are consistent with other projects that have been approved by the GEF CEO in 2012 including the PRC Jiangsu Yancheng Wetland Protection Project and the Viet Nam: Climate Resilient Rural Infrastructure Project. We would also like to highlight that the weekly rates for international consultants are set for budgeting purposes only and actual rates may be lower following the completion of a competitive tender process, where consultants will be selected on quality and cost basis. Further, we would note that further information on ADB's procedures has previously been provided to the GEF through a letter to the GEF CEO in December 2011. |
| | 23. Has the Tracking Tool3 been included with information for all relevant indicators? | See Q9 above #3 relating to the LULUCF TT. | Noted and considered recommendation/suggestions as shown above. |
| | | Please return the BD TT in spreadsheet format. | Completed and attached. |
| | | LD accounts for over one-third of the GEF investment so cannot be overlooked, please complete and return the LD TT. | Consultation with GEF LD Coordinator indicates that the GEF-5 LD Tracking Tool was never intended to be applied to GEF-4 projects. Further, considering that the LD tool did not exist at the time of the project initial project preparation, it is not reasonable for it to be prepared at this stage given that no funding has been budgeted.<br><br>We would also reiterate our comments from the last submission that the funding was provided not from the standard LD focal area, but from the Tropical Forest Account (TFA) window, which aimed to reduce deforestation rates in regions of large and mainly intact tropical forest, such as Amazonia, the Congo Basin, and Papua New Guinea/Borneo. Rather than having a standard LD focus (which is what the LD tracking tool has), the main intention is to fill the gap in the existing toolbox of GEF incentives to intensify the focus on reducing deforestation,<br><br>We also take note of the GEF Management Response to the Annual Country Portfolio Evaluation Report 2012, which states "*for multifocal area projects, the Secretariat does not require the full set of tracking tools be applied. Rather, the tools should only be completed for the "essential focal area indicators that need to be monitored throughout multifocal area projects."*<br><br>In the case that GEF considers this absolutely |

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| | | | necessary, then ADB could complete it at the commencement of project implementation using GEF Agency fees as budget |
| Recommendation at CEO Endorsement | 27. Is CEO Endorsement being recommended? | February 29, 2012 (IG/LH) Please address the issues identified above. | |

**ADB Responses to the 10 July 2012 Comments of the GEF Secretariat in the HOB-CEO Project Document**

| Review Criteria | Questions | Secretariat Comments at CEO Endorsement | ADB Remarks |
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| Eligibility | 4. Which GEF Strategic Objective/ Program does the project fit into? | July 9, 2012<br>- With the significant revisions to this project in comparison with the PIF, we invite the Agency to reduce the number of Strategic Programs. This project is presented as fitting with six Strategic Programs among the seven proposed in the SFM GEF4 strategy. It is not appropriate for a $2.5 million project. Based on the revised logical framework focusing the use of GEF resources on the management planning of the Kayan Mentarang National Park and the development of sustainable financing mechanisms, we recommend to focus the project on the SFM-SP1 (=BD1) and SFM-SP2 (=BD3). The visibility and the performance of the project will be better limited to two Strategic Programs. Please revise the part 1 (p1) and the section C (Consistency of the project with GEF strategies, p19-20). The description of the added value of the GEF is proposed in p. 25 is a good summary and perfectly fits with SP1 and SP2. | Revisions based on GEF SEC recommendations are provided in the CEO Endorsement Document 'Part I: Information' and the rationale is further detailed in Section C, "Consistency of the Project with GEF strategies". An explanation is also provided below.<br><br>The number of Strategic Programs has been reduced to focus the use of GEF resources on SFM-SP1, SFM-SP2 and SFM/LD/TFA-SP2:<br><br>• SFM-SP1:The strategic program targets Kayan Mentarang NP, its buffer zones and community forest areas to catalyze revenue mechanisms contributing to PA sustainable financing.<br>• SFM-SP2: Through this strategic program, the project targets i) institutional/policy level reforms, and ii) site-level interventions improving PA management effectiveness.<br>• SFM/LD/TFA-SP2: This strategic program will foster multiple land use, biodiversity conservation and HOB forest resource sustainability through improved management of the NP, buffer zone production landscapes, and biodiversity-friendly community livelihood development (via linkages to the an ADB administered sister-project funded by the Japan Fund for Poverty Reduction (JFPR); see Question 9, below).<br><br>Please also note that we have retained SFM/LD/TFA-SP2 in order to include focus on forest landscapes outside of the protected area. This includes work in 4 out of 10 of the priority HOB districts (i) Malinau and (ii) Nunukan in East Kalimantan, where the Kayan Mentarang National Park is located; and (iii) Kapuas Hulu and (iv) Melawi both in West |

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| | | | Kalimantan, which are identified sites for the PES and REDD+ demonstration and pilot projects. In these areas a key focus will be to support a transition towards conservation sensitive livelihood activities and sustainable forest management. ADB feels this combination of SPs represents a well targeted landscape level approach. It also capitalizes upon improved focus at the project site/sub-national level to generate catalytic effects at the landscape level. |
| Resource Availability | 6. Is the proposed GEF Grant (including the Agency fee) within the resources available for (if appropriate):<br><br>• The RAF allocation? | July 9, 2012<br>- The calendar has to be revised. The project document, submitted on June 29, cannot be approved in June 2012.<br><br>- Moreover, between PIF approval and today, a period of 36 months has occurred, far beyond the GEF4 22-month standard. The time between two submissions has been abnormally long (4-5 months) without any explanation or request for a milestone extension. The project document was submitted 3 times before (5/13/2011, 09/26/2011, 02/16/2012). This is the fourth submission (06/29/2012).<br><br>- Please, be aware that without a new submission in the next 30 days, the possibility remains that the project may be considered for cancellation. | ADB Board approval for the project in tentatively scheduled for September 2012. The calendar has been revised on the assumption the GEF CEO Endorsement will be approved in September 2012.<br><br>ADB is also concerned that the preparation of this project has been delayed and we would like to facilitate approval and implementation as soon as possible. Delay in the project processing have been communicated to GEF on several occasions, including correspondence with Mr Ramesh Ramankutty on 8 February 2012, and periodic updates to the responsible GEF Project Manager, including discussions in Indonesia in October 2011. As outlined in these communications, the key delays have been caused by:<br><br>(i) *Complications in finalizing the institutional arrangements and executing agency* for the project given ongoing issues in Indonesia regarding institutional responsibilities and mandates for REDD+. Originally the project was planned for execution by the Ministry of Forestry (MoFr) , however it was later recommended by the Government that it should move to the Coordinating Ministry of Economic Affairs, who chairs the national HOB working group. At a later stage however, the project was shifted back to MoFr given its role and responsibilities for PA management. These |

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| | | | changes led to changes in both the technical design and institutional arrangements, which were finalized through an MOU with MOFr.<br><br>(ii) *Problems with mobilization of the PPF funds*. ADB had submitted a PPG request to GEF, which was technically cleared by the GEF Secretariat in July 2010. Unfortunately however, the timing of the PPG approval meant that that the funding needed to be re-endorsed by the GEF Operational Focal Point to utilize GEF-5 STAR resources, instead of GEF-4 RAF (as originally planned). Since that time there have been 3 GEF Operational Focal Points in Indonesia, and while the current GEF OFP has informally indicated support to approve the fund, the official endorsement has never been received. This led to significant delay in the start of the preparation, which commenced after ADB decided to allocate internal funds. |
| | | - We acknowledge that ADB financed the PPG. We also understand that by now, the OFP has not yet endorsed GEF5 resources for this PPG. We urged the Agency to clarify the status of this PPG in the best time with the OFP. | To date the GEF CEO Endorsement Document for the project has been submitted 3 times - first on 22 December 2011, and then again on 14 February and 29 June. In each instance, additional comments raised by GEF Secretariat have required further work and national consultations, which have as a result taken more time. This has been further complicated by the fact that PPG funds were not available, which has limited our flexibility to rapidly respond on additional issues raised in the review sheets. We do however feel that the project remains highly relevant and important for addressing sustainable forest management issues and biodiversity conservation in the HOB, and we would like to requests the GEF's support to move the project forward as soon as possible to avoid further delay.<br><br>At this time the GEF OFP is still to confirm endorsement of the PPG funds, |

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| | | | although (as indicated above) this had been earlier agreed. In order to move the project forward, ADB will no longer request these funds. |
| Project Design | 9. Is the project design sound, its framework consistent & sufficiently clear (in particular for the outputs)? | July 9, 2012<br>- All points related to carbon estimations are addressed. Thanks.<br><br>- For the PES schemes, please, check the cell. 15 on risks.<br><br>- With the removal of the component on livelihoods (which might be developed under another project financed by Japan), it is questionable if it makes sense to maintain the full project objective with "developing livelihoods opportunities to local communities". Please, correct the formulation of the objective to maintain the consistency with the revised framework and the indicators that will be used. It seems that the revised objective may be for example "to ensure the sustainable management of forest resources and biodiversity in the Indonesian Heart of Borneo (HOB) by management planning and establishing sustainable financing schemes". | Noted with thanks.<br><br>For PES schemes, please see cell 15 on risks.<br><br>The livelihood work will be funded through a linked technical assistance titled "*Sustainable livelihoods systems for indigenous peoples in the Heart of Borneo'* administered by ADB and funded by the Japan Fund for Poverty Reduction (JFPR). This $2 million "sister project" (see Annex 5) was designed specifically to link with the GEF funded activities and will provide complementary alternative livelihood activities, and PES related benefit sharing mechanisms and sustainable financing. In the earlier project submissions, the project framework had been revised (from the PIF stage), with the livelihood activities being shown as co-financing to the GEF funded components rather than as a separate component. This was done with the view to simplify the framework. To avoid confusion however, we have now added the livelihood component back into the project framework (see new Component 4) with the associated co-financing from the JFPR. Overall, the JFPR funds compliments the GEF funded activities to provide a comprehensive management approach linking the management of protected areas and conservation landscapes with community livelihood development and the management of PA bufferzone and production landscapes.<br><br>Given the above, we thus propose to retain the project objective agreed to with the Indonesian Government :<br>*"To ensure the sustainable management of forest resources and biodiversity in the Indonesian Heart of Borneo (HOB) by strengthening the capacity of the GOI, developing sustainable livelihood opportunities with local communities, and* |

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| | | | *establishing sustainable financing schemes."* |
| Project Design | 15. Does the project take into account potential major risks, including the consequences of climate change and includes sufficient risk mitigation measures? | July 9, 2012<br>- Following the responses made in the cell 9 on the PES schemes, follow up questions are raised. We understand that four PES schemes will be designed and two will be implemented. Extractive and/or transforming enterprises involved in palm oil and rubber sectors will probably be involved. We acknowledge the importance to work with the productive sector. However, as the palm oil and rubber sectors are frequently involved in potential forest loss or degradation, it is important to anticipate any risk of this sort and avoid reputational risks. Please, provide more information about the safeguards that will be developed and confirm how reputational risks will be protected. Thanks.<br><br>- There are a risk description and mitigation measures related to the work with<br>indigenous people and the private sector. However, we did not find the equivalent for the work with the national and local administrations that represent both the main target and the main executing partner. It is essential to empower and train national and local agencies, and it is important to anticipate any kind of risk with them. Please describe associated risks and mitigation measures associated to the work with these agencies. | Section F of the CEO Endorsement Document on risks and mitigation measures has been updated (see page 29).<br><br>A summary is also provided below:<br><br><u>*PES schemes*</u><br>Private sector involvement will be carefully screened to identify those committed to sustainable development and to avoid any reputational or financial risks. This will be done through the development of PES business case scenarios, which will be ranked according to selection criteria including: public track record, credibility, commitment to sustainability and local community economic, environment and social rights, etc. Subject to screening, it is proposed to work through organizations already involved in industry associations such as the Roundtable on Sustainable Palm Oil (RSPO) and the Green Business Network (supported by WWF); and the Indonesian Mining Association and Indonesian Trade Chamber (KADIN) who are involved in a Partnership on Sustainable Development in Mining Activities. This will assist in identifying organization with demonstrated commitment to sustainability (or are strongly interested in moving in that direction. Wide landscape stakeholder inputs will also be sought in the development of PES, and PES monitoring in the two implementation phase pilots, as well as the constituency of regulators, investors, buyers and consumers built will help to ensure corporate responsibility, ecologically sound flows and sustainable natural resource use. Consultant resources have also been allocated to address potential risks in this regard (e.g. with additional time given and roles further clarified between the national Sustainable Finance/PES; Financial Specialist, and Private-Public Sector Specialist).<br><br><u>*Ownership and capacity constrains with national and local implementation*</u> |

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| | | | The project development has been coordinated extensively with the Ministry of Forestry (MoFr), who will serve as the Executing Agency and the Coordinating Ministry for Economic Affairs, who serves as the Indonesia Focal Point for Heart of Borneo Working Group. The project has been design through extensive dialogue and consensus building and alignment with national priorities and plans; and each of these agencies have expressed strong commitment to the program and in-kind support has been committed to the project (and the sister project funded by the Japan Fund for Poverty Reduction).<br><br>As EA for the Project, the Directorate General for Forest Protection and Nature Conservation within MOFr will delegate authority to the MOFr Conservation Offices/National Park Offices at the provincial and district levels to manage field level project activities as well as coordinate with the HOB working groups at the provincial and district levels. To support implementation, MoFr will delegate a Project Director, who will be supported by the consultant team, including administrative support from the International Team leader (funded by GEF), the National Deputy Team Leader (funded by ADB) and an Administrative assistant (funded by GEF).<br><br>Additional technical support will be provided by WWF at the local level, focused on strengthening natural resource management capacities in Kayan Mentarang National Park.<br><br>From an administrative perspective, ADB will provide additional training in procurement, contract management and financial management and disbursement prior to implementation. |
| Justification for GEF Grant | 16. Is the value-added of GEF involvement in | July 9, 2012<br>- We invite the Agency to revise (and then simplify) the sections related to the description of the | The Global Environment Benefits and consistency with GEF strategies has been revised, and measurable impacts of GEBs |

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<td>the project clearly demonstrated through incremental reasoning?</td>
<td>Global Environment Benefits and the way they will be monitored. The text should focus on SP1 and SP2. Please maintain the information consistent between sections (cf. p.11, third section, versus p13-14 on the GEB, versus the added value of the GEF proposed p.25). Actually, the description of the added value of the GEF that is proposed p. 25 is a good summary of the project and perfectly fits with SP1 and SP2.<br><br>- The text in the section C (Consistency with GEF strategies) has also to be updated/simplified (p.19-20).</td>
<td>at the output level and contribution to Aichi Biodiversity targets added. Please see Part II, Section A.</td>
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<td>Justification for GEF Grant</td>
<td>17. Is the type of financing provided by GEF, as well as its level of concessionality, appropriate?</td>
<td>July 9, 2012<br>- We find differences between the budget breakdown per component in the CEO endorsement and in the project budget (supplementary appendix B, p7-11). Please, clarify.<br><br>- There are significant changes between the PIF and the project document. Two components linked to actions on the ground have been removed (C3 on protected areas, $900,000 and C4 on SFM and livelihoods, $900,000). The component 1 on the reinforcement of policies and institutions has increased from $210,000 to $1,458,270. While we appreciate simplification of the result framework this was probably too ambitious and over-promising at PIF level. We were also encouraged to see the PIF was site oriented and it is still a justification of the project however, we wonder if it will still be the case with this revised project. It seems that 60 percent of resources ($1.485 million) are used for the component 1 that focuses on capacity building.<br><br>Please confirm that a major part of</td>
<td>Budget breakdown figures have been updated to ensure consistency. The project framework has been adjusted to better highlight the actions on the ground with GEF funding under Component 1 and 3. In total, these will provide about $1.45 million for on the ground actions. This is summarized in the table below:<br><br>
<table>
<tr><th colspan="2">Activity</th><th>Amount ($)</th></tr>
<tr><td></td><td colspan="2">Component 1: Implementation of management plan for the Kayan Mentarang National Park</td></tr>
<tr><td>a</td><td>Supplies and Materials</td><td>150,000</td></tr>
<tr><td>b</td><td>Implementation of the management plan</td><td>600,000</td></tr>
<tr><td></td><td>Subtotal</td><td>750,000</td></tr>
<tr><td></td><td colspan="2">Component 3:<br>Demonstration/pilot testing of PES mechanisms</td></tr>
<tr><td>a</td><td>Supplies and Materials</td><td>128,646</td></tr>
<tr><td>b</td><td>Implementation of the PES mechanisms</td><td>514,578</td></tr>
<tr><td></td><td>Subtotal</td><td>703,224</td></tr>
<tr><td></td><td>Total</td><td>1,453,224</td></tr>
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| | | the resources (at least $1 million - $1.2 million) will be assigned to site management planning and implementation. We are worried to see that only $600,000 are assigned to site interventions based on the budget proposed in the project document. It seems that workshops, seminars, training and tours are now the main budget items. At PIF level, the first component was focusing on capacity building for a budget of $210,000. We see no justification to spend more on this kind of activity, and it detracts from a site based project.<br><br>Please revise and clarify the nature and the extent of site intervention activities, and update the section related to this component (p11). Without confirmation that at least $1 million and if possible $1.2 million will be used for site activities, we will consider this change as a major change and the project itself might be jeopardized as it will have to go back to the Council. Thanks to reassure us about the site orientation o f this project. | As described in Annex 4 – ADB CDTA Supplementary Appendix on the ground activities funded by the GEF will include:<br><br>Component 1: The Project will support and build on earlier key activities contained in the PA management plan, such as: (i) facilitating the approval of the park's boundary and its field demarcation; (ii) final delineation of different zones in the 11 territories in the park, particularly in developing the buffer zone management framework; (iii) establishing conservation village models; (iv) implementation of participatory monitoring and enforcement systems including participatory patrol units.<br><br>Component 3: Design and pilot testing of two PES schemes in a) protected area sustainable use zones, and in b) community forest areas adjacent PA bufferzone. |
| Justification for GEF Grant | 19. Is the GEF funding level of project management budget appropriate? | July 9, 2012<br>- In the management costs, 4.5 months of international consultants are included for a budget of $90,000, as well as $30,000 for travel, $40,000 for "others", and $33,000 for national consultants. If the Directorate of Environmental Services of Conservation Areas and Protection forest of the Ministry of Forests, we are wondering the meaning of such support from an International consultant. It is pretty unusual to find a ratio of 3:1 between international and national consultant. Please, justify.<br><br>- On the management costs, it seems that there are discrepancies | The budget for Project Management has been updated as indicated in Table F and Annex C of the GEF CEO Endorsement Document. Project management will be implemented through a Project Administrative Assistant (15 months) and through support from the International Team Leader, who will provide 3 months of inputs towards project management. The ratio of person-months for international and local consultant is now 1:5. No GEF funds will be used to cover the time of ADB staff. ADB staff time is provided as an uncosted in-kind contribution. |

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| | | between the budget proposed in the CEO endorsement and the budget included in the project document. For instance, the "team leader", $90,000 in the CEO endorsement, is budgeted at $180,000 in the project document with GEF resources. On other hand, the budget assigned to local consultant does not appear in the project document. Finally, travel and per diem expenses for technical consultants are assigned to management costs, this does not seem correct.<br><br>- Please, let us remind that project management costs should reflect the actual costs associated with the unit executing the project on the ground. The eligible activities for project management costs are now included in policy document GEF/C.39/9. You can utilize the nomenclature included in this GEF5 policy document or refer to the appropriate GEF4 document. Please, clarify,<br>and provide a detailed and justified budget for the management costs.<br>- Please, confirm that no management cost resources are used to cover Agency staff and travel. | |
| Justification for GEF Grant | 20. Is the GEF funding level of other cost items (consultants, travel, etc.) appropriate? | July 9, 2012<br>- We take note of the explanations given about the costs of international consultants that reach up to $5,000 per week (or $20,000 per month). We will notify this point to the CEO. Even if other Program Managers have already cleared projects with such rates, it cannot be considered as the norm. It is also mentioned that the real costs will probably be lower. Please reduce them as far as you can. | As per our previous submission, we highlight that the budget figures that ADB have used are consistent with ADB's budget cost norms and our extensive experience in consultant procurement in the region. We attach copy of the letter sent to the GEF CEO on this issue in December 2011, which has never been responded to, and would greatly appreciate if this could reviewed and responded to by GEF management. |
| Justification for GEF Grant | 22. Are the confirmed co-financing amounts adequate | July 9, 2012<br>In the section G (p27), it is mentioned that the cofinancing has decreased but still reaches 1:3.55. | Co-financing has been confirmed at $6,450,000, with contributions from ADB - $1.95 million, Japanese Government - $2 |

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| | for each project component? | Unfortunately, the cofinancing ratio decreases to 1:2.55, far below the 1:4 that was mentioned at PIF level. Please, improve the ratio to at least 1:3. Please, take note that any potential but not confirmed financing (FIP, REDD, WWF, etc) is not an acceptable response. | million (through the ADB administered Japan Fund for Poverty Reduction – JFPR); WWF - $2 million and the Government of Indonesia - $500,000. This is a ration of GEF to co-finance of 1:2.55. No additional confirmed co-finance is available at this time.<br><br>It is however expected that an additional $17 million will be mobilized during project implementation through the Forest Investment Program, which would then bring the project end co-finance ratio to 1:9.27. Earlier it was expected that these funds could be confirmed prior to project approval, however at the moment the FIP project development in Indonesia is still ongoing (see attached draft Investment Plan). Once approved the FIP funding is intended to be integrated with the GEF funding through a change in project scope. While it is recognized that these funds cannot be counted as confirmed cofinance at this stage, we would seek GEF understanding that ADB is continuing to pursue further funding to complement the HOB program. |
| Justification for GEF Grant | 24. Does the proposal include a budgeted M&E Plan that monitors and measures results with indicators and targets? | July 9, 2012<br>We thank the Agency to include an M&E plan. However, please, confirm that the baseline will be available before the project starts. Thanks. | ADB can confirm that the baseline will be updated prior to project inception. ADB intends to engage a short term consultant using its own resources to finanlize the baseline indicators prior to project commencement. |

**ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF RESOURCES**

| *Position Titles* | *$/ person month* | *Estimate person months* | *Tasks to be performed* |
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| **For Project Management** | | | |
| *Local Consultants* | | | |
| Project Assistant | 6,000 | 15 | The Project Administrative Assistant will work closely with the Team Leader (international) and Deputy Team Leader (national) to coordinate the project. The position will perform administrative support functions, which may include clerical work such as personnel, finance, registry, and procurement. More specifically, the Project Administrative Assistant will: maintain office filing systems; coordinate official correspondence related to project activities; process personnel records and files; assist project staff on renewal of visa, travel permits and police registration; prepare documentation for discussions and briefing sessions, and prepare minutes of meetings; assist in the development of project workplans, and monitoring of project expenditures; record receipts and payments, assure accuracy of computation and completeness of documents and maintain continuing status of allotments against obligations, and; undertake other assignments that the Team Leader may designate. |
| *International Consultant* | | | |
| Protected Area Management Specialist/Team Leader | 20,000 | 3 | The Team Leader will direct the overall implementation of the Project and provide guidance to the project consultants and government counterpart in undertaking their individual tasks. The Team Leader will report to the ADB project officer-in-charge at the Southeast Asia Department and will also liaise with Directorate General for Forest Protection and Nature Conservation, through its Directorate for Environmental Services for Conservation Areas and Protection Forests (DESCA), Ministry of Forestry (MOFr), and the HOB National Working Group (NWG) Steering Committee. The Team Leader, will undertake the following tasks:<br>▪ develop the general work plan for project implementation based on the project report and other relevant documents and guide other international and national consultants in preparing their detailed individual work plans;<br>▪ conduct meetings with stakeholders and government officials of relevant line agencies and beneficiary groups to facilitate stakeholder participation and consensus in the implementation of the Project;<br>▪ with support from the PA social and participation specialist and using the *Guide to Consultation and Participation* by ADB, conduct stakeholder analysis to ensure that relevant stakeholders are identified and included in the participatory implementation process of the Project;<br>▪ prepare financial plans for the conduct of project activities;<br>▪ in collaboration with the government counterpart, prepare and conduct mobilization workshop to develop a common vision for the development of an effective HOB forest and protected area management strategies; and<br>▪ work closely with the national Deputy Team Leader and Project Administration Assistant to coordinate the work of team members and supervise the assessment and inputs of individual consultants to be consolidated and incorporated into relevant reports (e.g., inception, quarterly progress, mid-term, and final/terminal). |
| Justification for Travel | Travel cost for coordination and administration (under Component 4) is budgeted at $24,000 (from GEF funds). This will support coordination between national and local levels. | | |
| **For Technical Assistance** | | | |
| *Local Consultants* | | | |
| National PA Management | 6,000 | 10 | The national Protected Area Management Specialist will work with the international Protected Area Management Specialist/Team Leader in: |

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| Specialist | | | • reviewing and assessing previous efforts in managing forest resources and biodiversity in the HOB to develop "best practices" consistent with an IEM approach;<br>• assist preparing and conducting HOB tri-country dialogues between Brunei Darussalam, Malaysia, and Indonesia;<br>• assist review of the completed management plan for the Kayan Mentarang National Park and in identifying specific areas of support required from the Project;<br>• participate in assessing the local capacity to implement an improved forest management regime in the HOB, especially in relation to previous attempts towards local community-based management;<br>• identify critical management challenges in protected area management in the HOB and specific activities that are needed to address current challenges that confront management and conservation efforts, and other tasks. |
| National Social and Participation Specialist | 6.000 | 3 | The national Social Development and Gender Specialist will carry out the following tasks:<br>• conduct poverty and social analysis using secondary information from the project provinces and districts and derive "best" preliminary socioeconomic and gender indicators to serve as basis for identifying the potential target groups;<br>• identify key National Park stakeholders and prepare a "consultation and participation" plan to assess the needs, resource, capacity, and mandates of stakeholders.<br>• provide assessment of natural resource use, including information on existing conditions, degree of resource degradation, and risks to the PA and per specific floral/faunal species and natural resources utilized therein.<br>• Facilitate negotiation of collaborative management and benefit sharing mechanisms.<br>• Conduct baseline and endline social surveys, and; other tasks. |
| Sustainable Financing/ PES Specialist | 6,000 | 4 | The national Sustainable Financing/PES Specialist will be responsible for the following tasks:<br>• work with the international Sustainable Financing/PES Specialist conduct value chain analysis for specific forest products identified under the Project;<br>• review and assess potential sustainable finance/PES schemes identified during the project preparation grant stage of the Project and recommend appropriate schemes that can be pilot-tested and adopted in selected conversion, production, and protection forests in the project sites to generate sustainable financing mechanisms that may help sustainably manage the resources in these sites.<br>• identify entry points for the implementation of sustainable finance/PES schemes (e.g., set up and pilot direct payments; co-finance multiple-service strategies; and/or finance PES start-up costs);<br>• oversee and document the process of pilot implementation of sustainable finance/PES schemes in selected project sites, and; other tasks. |
| *International Consultant* | | | |
| Protected Area Management Specialist/Team Leader | 20,000 | 6 | The position is tasked (over approximately 6 months) to:<br>• guide the implementation of the Project and the selection of pilot and/or demonstration of "best practices" for REDD+ and sustainable finance/payment for ecosystem services (PES) schemes, consistent with an integrated ecoregion management (IEM) approach;<br>• lead HOB tri-country dialogues between Brunei Darussalam, Malaysia, and Indonesia to facilitate the formulation of solutions on transborder management issues;<br>• review the management plan of Kayan Mentarang National Park (NP) and |

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| | | | identify specific areas of support required from the Project,;<br>• collaborate with the national Institutional Development/Training specialist in assessing the local capacities and resources in areas covered under the Project for implementing an improved forest and protected area management/nature conservation regime in the HOB;<br>• work with the national Protected Area Management Specialist, REDD+ Specialists, Land Use and Spatial Planning Specialists (international and national), and national Social and Participation Specialist, to guide selection of suitable demonstration sites for REDD+ pilot investments in Kapuas Hulu and Melawi districts in West Kalimantan demonstrating the roles of: (i) sustainable forest management; (ii) biodiversity conservation; and (iii) increasing forest carbon stocks in reducing emissions from deforestation and forest degradation (REDD);<br>• provide advice on, and oversee, the mainstreaming of integrated approaches for forest resource management and biodiversity conservation into national, provincial, and district medium-term socio-economic development plans;<br>• work with the Sustainable Financing/PES specialists (international and national) in estimating the costs, benefits and potential modalities of four PES/sustainable finance schemes that may be piloted and/or demonstrated in two sites under the Project, and; other tasks. |
| Sustainable Finacing/ PES Specialist | 20,000 | 4 | The international Sustainable Financing/PES Specialist will undertake the following tasks:<br>• review and assess potential PES and sustainable financing schemes identified during the preparation grant stage of the Project, and recommend appropriate schemes that can be pilot-tested and adopted in selected areas.<br>• in collaboration with the Financial Analysts/Economists (international and national), identify entry points for the implementation of the PES and sustainable finance schemes (e.g., set up and pilot direct payments; co-finance multiple-service strategies; and/or finance PES start-up costs);<br>• in collaboration with the Land Use, Social and Participation, Financial Analysts/Economists, GIS and MRV Specialists, carefully document the process of pilot implementation of the schemes in two selected sites, including environment and socio-economic impacts, contributions to GEBs and land monitoring and sanctioning system; establish/develop an independent district organization with the required capacity to monitor and verify information on the status of forest environment services;<br>• identify and assess the workable and unworkable aspects of the PES mechanism and based on the results, fine-tune the to improve the model's effectiveness and efficiency;<br>• explore potential partners (e.g., private sector participation) to leverage funding support in the start-up and continuous implementation of PES;<br>• develop training modules with supporting training materials and conduct training of key members (primarily planners and technical experts with finance and economic backgrounds) for each provincial and district planning offices in the project sites on the application of the tools, particularly on the following: (1) estimating the economic costs to their province/district of past and present forest degradation; (2) estimating the costs and benefits of alternative future ecosystem management investment scenarios; and (3) the conduct of value chain analysis;<br>• document lessons learned and best practices in the application of PES and formulate guidelines in the up-scaling and/or its replication/application of the scheme to other sites and at the national level, and; other tasks. |
| Justification for Travel | Significant in-field travel is required to remote locations. International and local travel for project technical support and costs of living allowance equates to US$348,407, of which it is proposed GEF fund ca. 12% (or $US 46,000). | | |

## ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

### A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

Submission of the PPG Request to the GEF was made by ADB in November 2009 and then again in June 2010 following revision to address comments made by the GEF Secretariat. Subsequently on July 15, 2010, the GEF CEO approved the PPG request of $165,000 including Agency fee. However, as the approval was provided after the closure of GEF-4, ADB was advised that a re-endorsement of the funds would be needed from the Indonesia GEF-5 STAR allocation in order for the funds to be released by the GEF. This issue has been discussed with GoI and the GEF OFP is currently reviewing the request. To avoid further delays, the cost of preparation activities were subsequently advanced by ADB (see Table C) on the assumption that the PPG funding from GEF-5 would ultimately be endorsed and a reimbursement to ADB made. As this issue is still pending at the time of this submission, ADB has decided to forgo the PPG funding so that the project can move forward without further delay. A summary on completed preparation activities is provided below.

Preparation activities, which involved five target activities, were successfully completed. This resulted in a better understanding of the Indonesian policies and practices related to forestry, land use, climate change, and biodiversity conservation, and PA management. All the insights and information generated were crucial in the formulation and designing of appropriate strategies and interventions for the sustainable management of forest and conservation of biodiversity in the Indonesian HOB.

In particular, the assessment of policies and capacities helped formulate a policy and institutional reform agenda proceeding from a gap analysis at the regional, national and local levels. It focused on the implementation of the Indonesia NSPA for the HOB Initiative. The assessment covered forest-related policies, including emissions reduction from REDD, PA management, sustainable forest management, livelihoods and sustainable financing mechanisms. The capacity and institutional assessment helped identify the strengthening requirements to efficiently implement the NSPA. The needed support is reflected in the project design.

The assessment of land use and forestry related activities included an estimation of values of GHG emissions versus sink absorption to be used in planning land use change, to reduce emissions, expand sink capacity, and develop a widely supported standard land use that will serve both the goals of biodiversity conservation and climate change mitigation. Part of the preparation for such a plan involved the characterization of the current forest exploitation and management practices of various players (government, private sector concessionaires, communities, and forest occupants). Land use characterization, mapping, and estimation of the amount of GHG emissions versus sink absorption of various land uses were conducted in the proposed project sites which cover about 4.08 million hectares. This is broken down as follows: 1.36 million hectares of Kayan Mentarang National Park in Malinau and Nunukan, East Kalimantan; 0.42 million hectares of forests in Melawi District, West Kalimantan; and 2.30 million hectares of forests in Kapuas Hulu District, West Kalimantan.

The economic analysis of forest management practices, livelihoods, and other sustainable financing mechanisms used the results of the characterization of the forest exploitation and management practices to conduct a supply and demand chain analysis. It comprised the identification of the players in each segment of the chain, as well as the estimation of the value added, revenues accrued, and the financial and economic costs incurred. Included in the economic costs are the externalities of producing, processing, and transporting forestry products that are not captured in market-based pricing. The results of the analysis were used primarily to determine the players, who should pay for the cost for environmental services, the fair amount that should be paid, the mechanism/s for payment and reinvestment of collections for resource maintenance, and the people doing it. In addition, the results showed the gaps in the supply and demand chain in terms of environmental sustainability and social equity for which appropriate interventions can be developed and piloted using stakeholder partnerships. From the pilot results, income generation activities and livelihood opportunities that will sustainably manage and utilize the forest ecosystem, and schemes to capture the economic benefits of the standing forest that will serve as alternative to land conversion within and beyond the REDD options were developed.

The initial PA planning and management activity provided initial inputs in considering the inclusion of the proposed Muller-Schwaner National Park as a project site. However, in the course of consultation, this was dropped and a decision was made to focus the project only in supporting the implementation of Kayan Mentarang National Park's management plan. The main activities to be supported are: (i) facilitating the approval of the park's boundary and its field demarcation; (ii) final delineation of different zones in the 11 territories in the park, particularly in developing the buffer zone management framework; (iii) conduct of capacity building interventions for increasing knowledge, awareness, and skills of local stakeholders on park management[56] by establishing conservation village models; (iv) implementation of participatory park enforcement system; (v) participatory monitoring system of park activities; (vi) establishment of database for flagship species; and (vii) strategies for addressing and resolving transborder issues on forest resource management.

Apart from the national and local governments, local communities, scientists, and NGOs, the planning also included timber and plantation concession holders and other private sector resource users. Coordination and collaboration with other projects in the selected sites were made. The feasibility of this project as an 'integrator' of all ongoing initiatives in Indonesian Borneo was also assessed.

**B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:**

There are no major revisions in the original project design as indicated in the PIF. The project components generally remain the same, aligned, and in conformity with those approved in the PIF.

**C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:**

| *Project Preparation Activities Approved* | *Implementation Status* | *GEF Amount ($)* | | | | *Co-financing ($)* |
|---|---|---|---|---|---|---|
| | | *Amount Approved*[*] | *Amount Spent to date* | *Amount Committed* | *Uncommitted Amount** | |
| **Activity 1**: Assessment of relevant regional, national and local (provincial, district) policies and capacities | Completed | | | | | 30,000 |
| **Activity 2**: Assessment of land use and forestry related activities | Completed | | | | | 110,000 |
| **Activity 3**: Economic analysis of forest management practices, livelihoods, and other sustainable financing mechanisms | Completed | | | | | 20,000 |
| **Activity 4**: Initial protected area planning and management | Completed | | | | | 30,000 |
| **Activity 5**: Project detailed design and strategy preparation | Completed | | | | | 20,000 |
| **Total** | | | | | | 210,000 |

[*] Initially approved under GEF-4 but actual release is still pending the re-endorsement of the PPG amount by the GEF OFP from the Indonesia GEF-5 STAR. This amount was advanced by ADB on the assumption that it would be reimbursed following endorsement. See further details in Annex D, Section A above.

[56] This will include the establishment of resort-based management units in the park for specific objectives or purposes, such as: habitat protection, ecotourism development, cultural preservation, livelihood sources, etc.

**ANNEX E: CALENDAR OF EXPECTED REFLOWS**

***Not applicable***

## ANNEX F: BIODIVERSITY TRACKING TOOLS

*See Attached files.*

**ANNEX G: CLIMATE CHANGE MITIGATION TRACKING TOOL (LULUCF OBJECTIVE)**

An extract from the tracking tools in provided below. A copy of the excel file is also attached to this submission.

| General Data | Target | Notes |
|---|---|---|
| | at CEO Endorsement | |
| Project Title | Sustainable Forest and Biodiversity in Borneo | |
| GEF ID | 3435 | |
| Agency Project ID | | |
| Country | Indonesia | |
| Region | Southeast Asia | |
| GEF Agency | ADB | |
| Date of Council/CEO Approval | July 2011 | |
| GEF Grant ($) | 2,522,273 million | |
| Date of submission of the tracking tool | September 2011 | |
| Is the project consistent with the priorities identified in National Communications, Technology Needs Assessment, or other Enabling Activities under the UNFCCC? | 1 | Yes = 1, No = 0 |
| Is the project linked to carbon finance? | 0 | Yes = 1, No = 0 |
| Cofinancing expected ($) | 6,449,997 million | |

| Objective 5: LULUCF | | |
|---|---|---|
| **Area of activity directly resulting from the project** | | |
| Conservation and enhancement of carbon in forests, including agro-forestry | 1.309,052 | ha |
| Conservation and enhancement of carbon in non-forest lands, including peat land | | ha |
| Avoided deforestation and forest degradation | 6,655 | ha |
| Afforestation/reforestation | 2,000 | ha |
| Good management practices developed and adopted | 2 | 0: not an objective/component<br>1: no action<br>2: developing prescriptions for sustainable management<br>3: development of national standards for certification<br>4: some of area in project certified<br>5: over 80% of area in project certified |
| Carbon stock monitoring system established | 3 | 0: not an objective/component<br>1: no action<br>2: mapping of forests and other land areas<br>3: compilation and analysis of carbon stock information<br>4: implementation of science based inventory/monitoring system<br>5: monitoring information database publicly available |
| Lifetime direct GHG emissions avoided | 3.23 million | tons $CO_2$eq |
| Lifetime indirect GHG emissions avoided | 44.50 million | tons $CO_2$eq |
| Lifetime direct carbon sequestration | 62,674 | tons $CO_2$eq |
| Lifetime indirect carbon sequestration | | tons $CO_2$eq |

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## ANNEX H: ESTIMATE OF BIOMASS, CARBON STOCK, AND $CO_2$ EMISSIONS

Using the default values below (IPCC, 2006; WWF 2011; Brown 1997), the Indonesian HOB, with an area of about 12.613 million hectares[57], has a huge amount of carbon stock of about 1,671.223 million tons, with about 6,133.387 million tons of $CO_2$ equivalent (Table H.1). The amount of forest loss in the Kalimantan, which made up the main Indonesian HOB, was estimated at 246,020 hectares[58] per year, based on 2000-2005 records. This is already significant as it accounts for almost one-fourth of the annual average deforestation rate[59] in the entire Indonesia (Table H.2). If no management action is implemented, Indonesian HOB will continue to contribute an average of 119 million $CO_2$ per year to carbon emissions, or 1,190 million $CO_2$ over ten years.

The proposed forest areas to be covered by the project represent about 32.36% of the Indonesian HOB or some 4.08 million hectares[60]. This is broken down as follows: 1.36 million hectares of Kayan Mentarang National Park in Malinau and Nunukan, East Kalimantan; 0.42 million hectares of forests in Melawi District, West Kalimantan; and 2.30 million hectares of forests in Kapuas Hulu District, West Kalimantan (Table H.1). Specific pilot sites are: (a) Pujungan and Hulu Bahau sub-district in Malinau district; (b) Hutan Lindung, TN: Long Umung, Paraye, Wayagung in Nunukan district; (c) Belaban Ella, Menukung sub-district in Melawi district; and (d) Lanjak Protected Forest, Batang Lupar sub-district in Kapuas Hulu district (see location map below).

Using the default values in computing the corresponding biomass, carbon stock, and $CO_2$ equivalent (Tables H.4 and H.8), the following values are derived. Even by just implementing protection measures without engaging in reforestation or rehabilitation activities and assuming that there will be zero forest loss, the proposed project sites would be able to produce 1,082 million tons of above-ground biomass. This translates to about 540.9 million tons of carbon stock, with an equivalent 1,985.119 million tons of $CO_2$ (Table H.1).

Based on the reported forest destruction in East and West Kalimantan from 2003-2008 as analyzed by WWF (2009)[61], Malinau and Nunukan districts have an average annual forest loss of 0.95%, while Melawi and Kapuas Hulu districts have annual forest losses of 1.35% and 0.74%, respectively (Table H.3). With no intervention, in 2012 – the year when the proposed project is scheduled to commence - the forest areas in the three proposed project sites will be reduced to only about 3.98 million hectares; and ten years after (2022), this will only be about 3.64 million hectares. This means a corresponding projected forest loss of 332,742 hectares over ten years, with an equivalent emission of 16.18 million tons of carbon dioxide (Table H.4).

### Proposed Project Intervention

In coordination and partnership with concerned local communities and indigenous peoples, the project proposes to conserve and enhance forest carbon through supporting implementation of the management plan for Kayan Mentarang National Park covering 1.36 million hectares within Malinau and Nunukan Districts in East Kalimantan. The project will also contribute to avoiding deforestation and forest degradation in West Kalimantan through piloting PES schemes - including REDD+ demonstration sites - in Kapuas Hulu and Melawi Districts of West Kalimantan. In addition, the project proposes to rehabilitate a total of 2,000 hectares of degraded forest areas in the project sites (1,000 hectares in Kayan Mentarang National Park and 500 hectares each for Melawi and Kapuas Hulu districts). These sites will be planted with a 50-50 mixture of indigenous dipterocarp/hardwood tree species and indigenous fruit tree species, using a spacing of 5 x 5 meters. With growth assumptions of 100%, 80% and 60% survival rate, the numbers of forest and fruit trees that will survive are 800,000 trees; 640,000 trees and 480,000 trees, respectively. Details of these assumptions are in Table H.5.

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[57] National Strategic Plan of Action: Indonesian HOB. Kelompok Kerja National (National Working Group) HOB, 2008.
[58] General Director of Forestry Planning, Statistics of Forestry 2008, Ministry of Forestry, 2009.
[59] Deforestation rate in Indonesia is computed at 1.04 million hectares per year from 2000–2005. Source: General Director of Forestry Planning, Ministry of Forestry. 2009. *Statistics of Forestry 2008*.
[60] Forest cover area (in hectare) was sourced from the Landsat Image interpretation done by the Ministry of Forestry, Indonesia, 2010.
[61] From Modis Satellite Image Analysis done by WWF-SarVision in 2009.

Assuming that these sites are planted in 2012 (project expected commencement date), the amounts of biomass, carbon stock and $CO_2$ equivalent of these planted trees can already be calculated on the 5th (2017) and 10th (2022) year of tree growth. With a conservation estimate of 1.2 cm/year for dipterocarp/hardwood species and 1 cm/year for fruit trees, the diameters of planted trees will be 6 cm and 12 cm for dipterocarp/hardwood species and 5 cm and 10 cm for fruit trees (Sutisna, M 2001, as cited by Istomo, et. al., 2010)[62]. Using Brown's (1997)[63] default values for biomass accumulation (kg) per tree and multiplying this with the proposed number of trees to be planted under the different growth assumptions, Table H.6 provides the amounts of biomass that may be produced. Looking at the 10th year growth period alone, the combined reforestation/rehabilitation species can produce 42,732 tons, 34,186 tons and 25,640 tons of biomass under the 100%, 80% and 60% growth scenario. At 80% growth assumption, this is translated to about 17,093 tons and 62,674 tons of carbon stock and $CO_2$ equivalent, respectively. Details of other computations are in Table H.7.

Finally, in Table H.8, an estimate of project impacts on carbon emissions reductions is shown. Overall, with project interventions[64], lifetime direct carbon emissions avoided over a conservative lifetime length of 10 years (2013-2022) is estimated at around 3.233 million tonnes $CO_2$. Support to implementation of the management plan for the Kayan Mentarang National Park is projected to contribute to avoiding[65] the release of around 44.5 million tonnes $CO_2$ to the atmosphere. Meanwhile, the 2,000-hectare rehabilitation project, assuming an 80% growth assumption, can generate a lifetime direct carbon sequestration of around 62,674 tons $CO_2$. In total, the project's contribution to addressing climate change is estimated at 47.797 million tonnes $CO_2$, or 4% of projected $CO_2$ emissions in Indonesian HOB over ten years.

[62] A. B. Istomo et al. 2010. Restoration scenario of the important biology corridor between Sentarum National Park and Betung Kerihun National Park with estimation of carbon sequestration by project growth of the mixed plantation in Lanjak, West Kalimantan. *WWF-Indonesia Technical Project Report*. 2010.

[63] S. Brown. 1997. Estimating biomass and biomass change of tropical forests. *A primer, FAO Forestry Paper* No. 134. Rome.

[64] Among others, project interventions come in the form of: (a) undertaking of protection measures and sustainable management implementation through the strengthened capacity of protected area and forest authorities, (b) conduct of massive IEC advocacy on forest and biodiversity management, and (c) strong participation and involvement of local communities in REDD+ pilot projects and PES schemes.

[65] Net of allowance for uncertainties

**Table H.1. Computed Carbon Values for the Entire Indonesian HOB and the Proposed Two Project Sites in East and West Kalimantan, 2011**

| | Indonesian HOB | Project Areas | | | |
|---|---|---|---|---|---|
| | | Kayan Mentarang National Park | Melawi District, West Kalimantan | Kapuas Hulu District, West Kalimantan | Total |
| Forest Cover, 2009 (ha) | 12,613,000 | 1,360,000 | 420,063 | 2,302,235 | 4,082,298 |
| Above-ground Biomass (ton) | 3,342,445,000 | 360,400,000 | 111,316,695 | 610,092,275 | 1,081,808,970 |
| Carbon Stock (ton) | 1,671,222,500 | 180,200,000 | 55,658,348 | 305,046,138 | 540,904,485 |
| $CO_2$ equivalent (ton) | 6,133,386,575 | 661,334,000 | 204,266,135 | 1,119,519,325 | 1,985,119,460 |

**Table H.2. Estimated Annual $CO_2$ Emissions in the Indonesian HOB (Business as Usual Scenario)**

| Description | Indonesian HOB |
|---|---|
| Average Forest Loss per year (ha) | 246,020 |
| Computed Biomass (ton/ha) | 65,195,300 |
| Carbon Stock (ton) | 32,597,650 |
| $CO_2$ Equivalent (ton), Business as Usual | 119,633,375 |

## Table H.3. Projected Decrease in Forest Cover in the Project Sites (Without Intervention or Business-as-Usual)

| Project Area | Computed Annual Forest Loss (%) 1/ | Forest Cover (ha) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2012 | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** |
| Kayan Mentarang National Park, Malinau and Nunukan, East Kalimantan | 0.95% | 1,321,607 | 1,309,052 | 1,296,616 | 1,284,298 | 1,272,097 | 1,260,012 | 1,248,042 | 1,236,186 | 1,224,442 | 1,212,810 | 1,201,288 |
| Melawi District, West Kalimantan 1/ | 1.35% | 403,279 | 397,835 | 392,464 | 387,166 | 381,939 | 376,783 | 371,696 | 366,678 | 361,728 | 356,845 | 352,028 |
| Kapuas Hulu District, West Kalimantan | 0.74% | 2,251,503 | 2,234,842 | 2,218,304 | 2,201,888 | 2,185,594 | 2,169,421 | 2,153,367 | 2,137,432 | 2,121,615 | 2,105,915 | 2,090,332 |
| **TOTAL** | | **3,976,389** | **3,941,728** | **3,907,384** | **3,873,352** | **3,839,630** | **3,806,216** | **3,773,106** | **3,740,296** | **3,707,785** | **3,675,570** | **3,643,647** |
| **Projected Deforestation per year (ha)** | | | **34,661** | **34,345** | **34,032** | **33,722** | **33,414** | **33,110** | **32,809** | **32,511** | **32,215** | **31,923** |
| **Projected Deforestation, 10 years, 2013-2022 (ha)** | | | | | | | | | | | | **332,742** |

## Table H.4. Computed Biomass, Carbon Stock, $CO_2$ Equivalent and Carbon Sequestration Rate (Without Intervention or Business-as-Usual)

| Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| Biomass of Projected Area Deforested (ton) 2/ | 9,185,073 | 9,101,316 | 9,018,364 | 8,936,209 | 8,854,842 | 8,774,256 | 8,694,442 | 8,615,394 | 8,537,103 | 8,459,561 |
| Carbon Stock (ton) 3/ | 4,592,537 | 4,550,658 | 4,509,182 | 4,468,104 | 4,427,421 | 4,387,128 | 4,347,221 | 4,307,697 | 4,268,551 | 4,229,781 |
| Projected $CO_2$ Emissions (ton) 4/ | 16,854,610 | 16,700,915 | 16,548,698 | 16,397,943 | 16,248,635 | 16,100,759 | 15,954,302 | 15,809,248 | 15,665,584 | 15,523,295 |
| Average Projected $CO_2$ Emissions | | | | | | | | | | 16,180,399 |

Notes:

1/ Based on Modis satellite image analysis of forest cover change, 2003-2008 by WWF-Sarvision (WWF, 2011)
2/ Biomass is assumed to be 265 tons per hectare of forest cover, based on average above-ground biomass density for Indonesian HOB estimated to be between 265 and 275 tons/ha (WWF, 2011 ; Brown, 1997 )
3/ Carbon stock used 0.50 carbon fraction in above-ground biomass, based on IPCC Guidelines for GHG Inventories, wherein carbon fraction is estimated to be between 0.47 and 0.50 (IPCC, 2006; Brown, 1997)
4/ Carbon dioxide equivalent (CO2e) computed using gravimetric factoring by molecular weight (1 carbon =44/12 = 3.67 CO2), (IPCC, 2006)

**Table H.5. Number of Forest/Fruit Trees for the Proposed 2,000 Hectares Rehabilitation Area under the REDD+ Scheme in the Project Sites**

| Project Sites | Rehabilitation species | Area to be planted (ha) | Number of Trees at 5x5m Spacing per Hectare | Growth Assumption (No. of Trees) | | |
|---|---|---|---|---|---|---|
| | | | | 100% | 80% | 60% |
| Kayan Mentarang National Park, East Kalimantan | Hardwood Forest Species | 500 | 400 | 200,000 | 160,000 | 120,000 |
| | Mixed Fruit Trees | 500 | 400 | 200,000 | 160,000 | 120,000 |
| | Sub-Total | 1000 | 400 | 400,000 | 320,000 | 240,000 |
| Kapuas Hulu and Melawi, West Kalimantan | Hardwood Forest Species | 500 | 400 | 200,000 | 160,000 | 120,000 |
| | Mixed Fruit Trees | 500 | 400 | 200,000 | 160,000 | 120,000 |
| | Sub-Total | 1,000 | 400 | 400,000 | 320,000 | 240,000 |
| **Total** | | **2,000** | **400** | **800,000** | **640,000** | **480,000** |

**Table H.6. Estimate of Biomass for the Two Project Sites for Both Rehabilitation Species (Hectares)**

| Type of Rehabilitation Species | Year | Diameter (cm) | Biomass (kg) per tree | Number of Trees | Biomass (ton) by Growth Assumption | | |
|---|---|---|---|---|---|---|---|
| | | | | | 100% | 80% | 60% |
| Hardwood Forest Species | 5th (2017) | 6 | 10.6 | 400,000 | 4,240 | 3,392 | 2,544 |
| | 10th (2022) | 12 | 67.94 | 400,000 | 27,176 | 21,741 | 16,306 |
| Mixed Fruit Trees | 5th (2017) | 5 | 9.74 | 400,000 | 3,896 | 3,117 | 2,338 |
| | 10th (2022) | 10 | 38.89 | 400,000 | 15,556 | 12,445 | 9,334 |
| Combined Species | 5th (2017) | | | 800,000 | 8,136 | 6,509 | 4,882 |
| | 10th (2022) | | | 800,000 | 42,732 | 34,186 | 25,640 |

**Table H.7. Computed Carbon Stock and $CO_2$ Equivalent for the Two Project Sites on the 5th and 10th Year of Operation (Assumes 80% Growth)**

| Year | Biomass (ton) | Carbon Stock (ton) | $CO_2$ Equivalent (ton) |
|---|---|---|---|
| 5th | 6,509 | 3,254 | 11,933 |
| $10^{th}$ | 34,186 | 17,093 | 62,674 |

## Table H.8. Summary of Computed Biomass and Carbon Values (With and Without Project Intervention)

| | |
|---|---|
| **Lifetime Direct GHG Emissions Avoided during Project Supervised Implementation Period (2013-2015) and Post Project (2016-2022) as a result of PES schemes put in place through GEF** | |
| Estimated Deforestation, 2013-2022, in hectares (Table H.3) | 332,742 |
| Decrease in Forest Loss with Project Intervention, in hectares (~2% over 10 years) | 6,655 |
| **Lifetime direct GHG emissions avoided during and post-project, CO2 (2013-2022, 10 years)** | **3,233,141** |
| | |
| **Lifetime Indirect GHG Emissions Avoided from Strengthened Policies and Institutions in the Kayan Mentarang National Park** | |
| Baseline Forest Cover, in hectares (2013) | 1,309,052 |
| Estimated Forest Cover at 0.95% Annual Deforestation Rate, in hectares (2022) | 1,201,288 |
| Estimated Deforestation, in hectares (2013–2022) | 107,764 |
| *Gross Lifetime indirect GHG Emissions Avoided During and Post-Project, $CO_2$* [66] | *52,355,229* |
| Less: 15% allowance for uncertainties [67] | 7,853,284 |
| **Net Lifetime indirect GHG Emissions Avoided During and Post-Project, $CO_2$ (2013–2022, 10 years)** | **44,501,945** |
| | |
| **Lifetime Carbon Sequestration, Direct and Indirect** | |
| Area to be Planted, in hectares | 2,000 |
| **Lifetime Direct Carbon Sequestration at 80% growth assumption, in $CO_2$ (2013-2022) - Table H.7** | **62,674** |

| | |
|---|---|
| **Total Area of Activity Directly Resulting from the Project** | **1,317,707** |
| **Total CO2 emissions reduction (with project intervention), 2013-2022, 10 years** | **47,797,759** |
| **Total CO2 emissions (without project intervention), 2013-2022, 10 years** | **1,195,247,167** |
| **% contribution to reducing CO2 emissions over 10 years** | **4%** |

**Note: Above computations are based on the following default values:**

- 350 tons/ha average above-ground biomass density for tropical rainforest in insular Asia (IPCC, 2006) [68]
- Biomass default value most used for the calculations is 265 tons/ha, which represents the lower range of the 265 to 275 tons/ha average above-ground biomass density estimated for Indonesian HOB (WWF, 2011[69]; Brown, 1997[70]).

[66] Based on the assumption that full implementation of the general management plan in Kayan Mentarang National Park will result in zero forest loss over ten years (2013-2022).

[67] The 15% allowance for uncertainties is based on assumptions for confidence deduction used in the Voluntary Carbon Standards (VCS) Methodology for Avoided Mosaic Deforestation of Tropical Forests (VM 0009, Version 1.0,) as applied by Wildlife Works to the Kasigau Corridor REDD+ Project, the first REDD+ project to receive voluntary carbon units (VCU), or carbon credits. See Equation 35 for confidence deduction in: http://www.v-c-s.org/sites/v-c-s.org/files/Methodology%20for%20Avoided%20Mosaic%20Deforestation%20of%20Tropical%20Semi-Arid%20Forests%20V-32.pdf

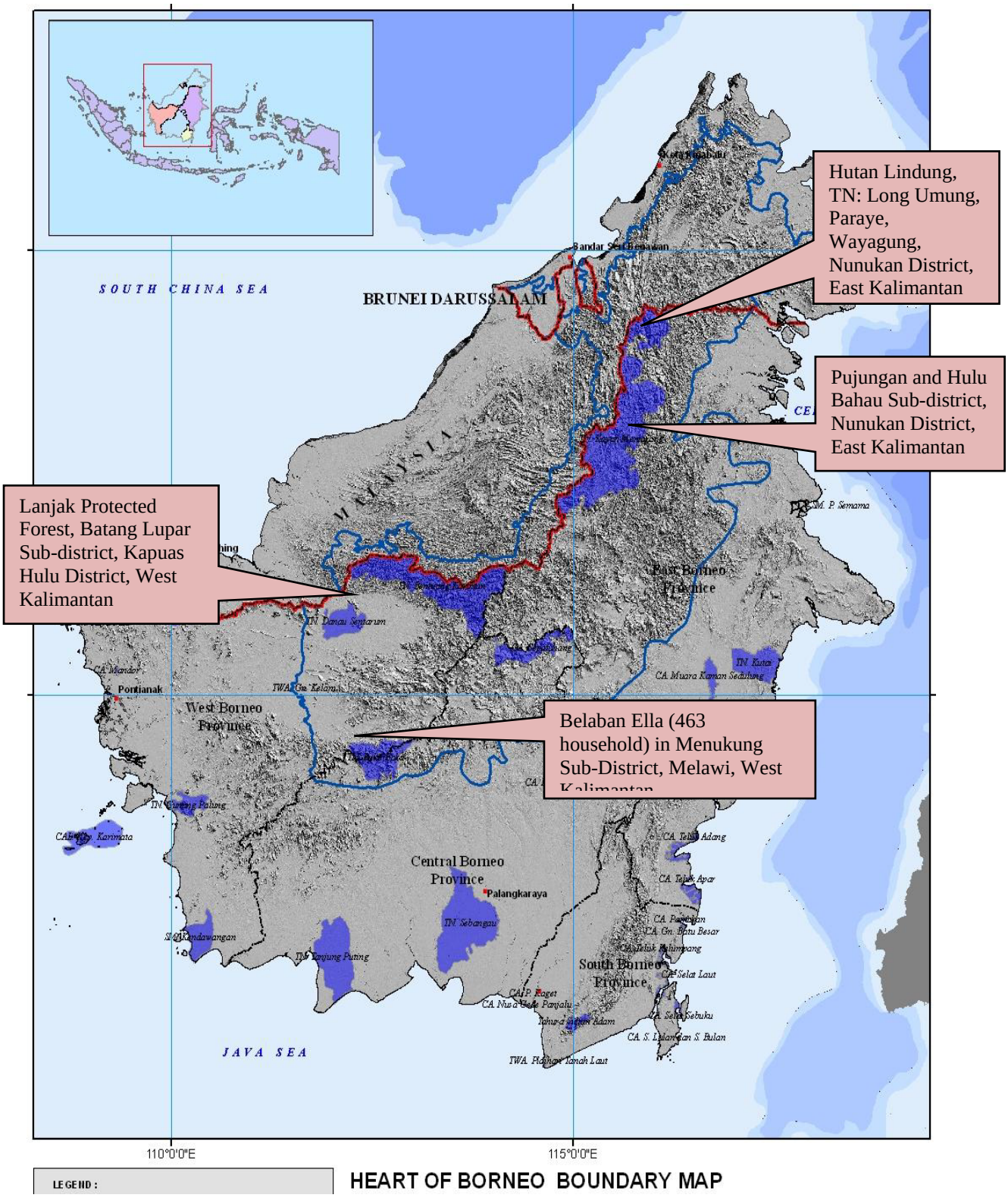
[68] *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Chapter 4: Forest Land.

[69] A. Budiman et al. 2011. Reference scenario on the development of $CO_2$ emissions through deforestation and forest degradation in Bukit Baka and Bukit Raya National Park and buffer zone, West Kalimantan, Indonesia. *WWF-Indonesia Technical Project Report (BMU IKI Heart of Borneo*, BMU No. 08_II_029), 2011.

[70] S. Brown. 1997. Estimating biomass and biomass change of tropical forests. *A primer, FAO Forestry Paper* No. 134. Rome.

- Carbon stock default value used is 0.50, which represents the higher range of the 0.47 to 0.50 estimated carbon fraction in above-ground biomass (IPCC, 2006; Brown, 1997)
- Carbon dioxide equivalent (CO2e) computed using gravimetric factoring by molecular weight (1 carbon =3.67 $8CO_2$), (IPCC, 2006).The biomass default value of 265 tons/ha is equivalent to 486 tons of carbon dioxide per hectare, using the above assumptions.

**Location Map of Proposed REDD+ Project Sites**



## ANNEX I. POTENTIAL PAYMENT FOR ENVIRONMENTAL SERVICES (PES) SCHEMES AND ALTERNATIVE LIVELIHOOD DEVELOPMENT PROGRAMS

The development of operating PES systems is a major component activity of the project, which will serve as financial mechanism to support several other financial strategies in pursuing and scaling up sustainable forest management and biodiversity conservation. The GEF grant will be provided to serve as seed money and/or start up capital in initializing PES schemes until sustainable arrangement between environmental services providers and buyers are concretized. Through this approach, concerns of the GOI, particularly in the aspects of financing forest management and protection of biodiversity in the HOB area, will be met while mechanisms for private and public sector investments in environmental conservation and sustainable development are being explored and developed.

The private sector, particularly the local water companies, privately owned production areas and processing facilities in the landscape, tourists and tourism entrepreneurs, and other groups who benefit from environmental services are important to the implementation of PES. Involvement of these individuals and private companies will facilitate potentials for opening new markets for environmental goods and services, catalyze and scale up SFM and PES investments in other parts of the HOB, and ensure maintenance and protection of healthy HOB ecosystems and flows.

Below PES schemes identified during project preparation that will be further examined via business case development and potentially pilot tested in the selected project sites. The final selection of PES schemes shall be done during the project's inception period.

### A. Forest Cover in Kapuas Hulu, West Kalimantan

**Location and Description**: Upper Kapuas Hulu Basin, particularly in riparian areas of Sibau, Mendalam and Kapuas.

The Upper Kapuas Hulu Basin is the main source of water for the Kapuas River, the longest river in Kalimantan, which is about 1,300 kms long. The river empties in the nearby Pontianak, the capital city of West Kalimantan Province. The dominant land cover in Kapuas Hulu Basin is forest and provides an average rainfall of 4100 mm/year. Rainfall is evenly distributed throughtout the year with the wettest month in November and December.

In the upstearm of Kapuas Hulu Basin lies Betung Karihun National Park, one of the last frontiers of natural habitat in Kalimantan. The park is a hot-spot biodiversity area containing thousands of different plant and animal species that are mostly edemic to Kalimantan.

The watershed area and Betung Karihun National Park are experiencing rapid degradation and those who own or manage the lands in these areas, particulary the local communities have little incentive to maintain and protect them.

**Environmental Service**: Watershed protection, soil erosion and sedimentation control at the downstream level or the payment for watershed services (PWS) scheme

**Environmental Service Providers/Suppliers**: Local communities of Sibau, Mendalam, and Kapuas

**Environmental Service Buyers**:

a. Local Water Company (PDAM) in Putus Sibau;
b. PDAM costumers; and
c. other water utilities.

**PES Mechanism**: Local communities will be engaged in the restoration of the degraded land, maintenance of the forest cover, prevention of soil erosion, establishment of sedimentation traps, and in building of proper sanitation system in their respective villages. Through these efforts, the supply of continuous and quality water to water utilities and companies can be assured. These water companies, on the other hand, will pay the local communities for their services and they will draw the payment from: (a) water services fees incoperated into the water bills of the PDAM; (b) increase in CRS budget allocation; (c) increase in government budget allocation for supporting the watershed management; and (d) fees from other buyers contributing to the PWS mechanisms.

## B. Protection of Landscape of Sentarum Lake National Park

**Location and Description**: Tourist destinations in Sentarum Lake National Park, particularly in Rinjani Mountain in Lombok Island-West Nusa Tenggara and Bunaken Bay in Menado, North Sulawesi Provinces.

The Sentarum Lake National Park is a famous destination for not only local tourists, but also for foreign tourists, particularly from Sarawak-Malaysia.

In 2006, Sentarum Lake National Park was named a Ramsar site because of its very rich freshwater biodiversity and likewise by serving as an important transit area for bird migration. The lake itself is around 132,000 hectares.

**Environmental Service**: Ecotourism development and protection of biodiversity

**Environmental Service Providers/Suppliers**:

a. Local tourism groups; and
b. Sentarum National Park Authority .

**Environmental Service Buyers**:

a. Visitors/tourists; and
b. Tourism entrepreneurs, such as restaurants, and travel agents.

**PES Mechanism**: The Sentarum National Park Authority and the local tourism groups and operators are expected to provide decent and first-class ecotourism products and services through the maintenance and protection of the lake's freshwater ecosystem, developing of ecotourism business plan, establishing of local tourism groups, and building of environmental friendly facilities and infrastucture requirements. In exchange for these efforts, they will get payment through the PES that will be incoporated in entrance fees, meal receipts, transporation, accomodation, and other services.

To facilitate this, intermediaries like WWF Indonesia shall be tapped to conduct economic valuation (willingness to pay) study; ecosystem services study; policy review and advocacy; strenthening of the local tourism groups; assist the buyers to calculate the PES fees; and building of necessary institutional arrangment mechanisms that will not only relate to the provision of ecotourism products and services, but more importantly in the protection of the Sentarum Lake ecological integrity that is crucial in the conservation of biodiversity in the area. It must be noted that Sentarum Lake is one of the most biodiverse lake systems in the world and by protecting and preserving this important resource, through the help of local community, this will ensure the continuing provision of an environmental service that is biodiversity protection.

## C. Supply of Water to Oil Palm Plantation and Coal Mining Plant in Kapuas Hulu, West Kalimantan

**Location and Description**: Semitau sub-district, Kapuas Hulu. The population in this sub-district is between 10,000 and 20,000.

Kapuas Hulu has an area of about three million hectares. More than half of this (56.51%) had been allocated for conservation, where about 1.63 million hectares have been declared either protection forests or National Parks. The local administration in Kapuas Hulu has already issued license for the conversion of around 360,000 hectares (12% of total land mass) for plantation and coal mining activities, but so far only about 5% has entered an operational stage. Some of these are in the sub-district of Semitau.

While oil palm plantations were reported to have contributed in the area's economic and social development, particularly in the Semitau sub-district, the expansion of these plantations has crossed the border of protected forests and encroaching upon the biodiversity rich HOB.

There is a strong need to protect the HOB from further encroachment. A management mechanism is being considered to help local people to guard protection forests and at the same time, with selected companies to rehabilitate already destroyed areas.

**Potential Environmental Service**: Watershed protection services and rehabilitation of degraded areas

**Environmental Service Provider/Supplier**: Local communities that may be engaged in forest and watershed protection and rehabilitation.

**Environmental Service Buyer**:

a. Oil palm plantation owners and companies who are members of the Roundtable for Sustainable Palm Oil (RSPO); and
b. Coal mining companies.

**PES Mechanism**: Supply of high quality and reliable water supply is an important aspect of oil palm cultivation. Deficit or surpluses of water create stress to oil palm and adversely affect crop yields. To realize full oil palm yield potential, focus should be given to ensuring adequate water and moisture in the soil throughout the year in tandem with other agronomic practices. Water is also important in coal mining activities. Protection of watershed areas that serve as sustainable sources of this water is crucial.

Local communities that are residing inside a particular watershed area will be contracted to protect and maintain the forest cover in that area. They will also be tapped in the reforestation and rehabilitation of some of the degraded areas. Through this approach, the supply of the required quality and quantity of water will be assured. In addition, the local communities engaged in protection activities will be paid by the government from the taxes and other forms of payments from oil palm plantation owners, coal mining companies, and related industries.

The government should also take into account that these local communities are engaged in sustainable production of a variety of non-timber forest products and agro-forestry products (such as natural rubber, rattan, *ilipe* nut oil, cassava, vegetables). The government should assist these local communities in accessing markets for their cash crops from the forest and agro-forestry gardens as part of their compensation.

### D. Ecotourism Development in Malinau, East Kalimantan

**Location and Description**: Hulu Bahau[71] sub-district, particularly in the villages of Apoping, Long Berini and Long Alano with about 900 families. These areas are located in the buffer zone of the Kayan Mentarang National Park and belong to Hulu Bahau customary areas. The local communities are engaged in traditional cultivation of medicinal plant and cinamomun.

**Environmental Service**: Ecotourism development and protection of biodiversity

**Environmental Service Providers/Suppliers**: Local communities engaged in the provision of ecotourism products and services, e.g., homestay, local health and wellness services, souvenirs and the like

**Environmental Service Buyers**:

a. Visitors/tourists; and
b. Travel agents, where PES will be incoporated in entrance fees, meal receipts, transporation, accomodation, and other services.

**PES Mechanism**: Existing organizations of local people in the sub-district will be organized and engaged in the protection and rehabilitation of the surrounding forests in Hulu Bahau. This will certainly help in the conservation of biodiversity , which forms part of the major tourism attractions, products and services in the area. Local protection and conservation schemes will be considered in the design of protection and conservation strategies to be applied. It is important to note that the Dayak, who reside in this area have their own traditions and practices that relate to sustainable forest management. The protection scheme to be applied will be aligned to these traditional practices.

[71] Source: http://www.bimpbc.org/ecotourism/m_present/p_eghenter.pdf.

With the intervention of the project and assistance from local organizations like the WWF-Indonesia, the Hulu Bahau sub district will be developed into an ecotourism destination. There are existing local tourism groups that will be organized into more "formal" tour operators, who will engage in ecotourism product development and provision of related services. Environment-friendly facilities designed out of local architecture will be built to cater the needs of the visitors and tourists. In coordination with our local tourism entrepreneurs, costly infrastructure will be built and they will be allowed to operate in the area with the understanding that local people will be prioritized in hiring (as tour guides, food providers, etc.) and, to some extent, will be made as partners in the tourism enterprise.

Potential tourism products and services that could be developed and offered in the area are:

(a) Watching wildlife in the Grasslands. In the grasslands of Long Tua, upstream from the village of Apau Ping, visitors will find one of the best wildlife-watching areas in Kayan Mentarang National Park. From Apau Ping, trekkers can also arrange long-distance forest treks to Long Kayu, Krayan Hulu, the highlands to the north.

(b) Experiencing Dayak's traditional way of life. The Pujungan River is the entry point to a wide stretch of uninhabited forest and to the mountain range that separates the Pujungan area from Apo Kayan. From the village of Long Pujungan, visitors can go upriver to the villages of Pua and Long Jelet, a small settlement that is the last outpost on the Pujungan River.

There, visitors can still practice traditional ways of life: swidden rice agriculture, collecting forest products, fishing and hunting with traditional tools. Visitors coming during the New Year will have a chance to be part of traditional celebrations when the sound of traditional Kenyah guitars fills the air and locals perform the famous hornbill dances.

The local ecotourism committee has surveyed various treks to the majestic waterfalls and peaks in the area, and accommodation is provided in the houses of local people. All this makes up for an unforgettable experience.

Continuing upstream along the Bahau River, visitors will pass the village of Long Kemuat, and the burial site of Long Pulung. In Long Berini, it is possible to witness Dayak Kenyah cultural revival, including traditional carving. Traditional dancing awaits travellers in the village of Apau Ping, the last settlement before the border with Sarawak.

**E. Ecotourism Development in Nunukan, East Kalimantan**

**Location and Description**: Krayan Highland, including its Protection Forests: Long Umung, Paraye, Wayagung:12,000 hectares. These villages are buffer zone of Kayan Mentarang National Park, and these areas belong to Krayan Hilir, Krayan Tengah and Krayan Darat customary areas.

In the Krayan highlands, gentle slopes covered the dense forests, and wide valleys interlaced with rice paddies, garden and fruit groves create a unique and pleasant landscape. The cool weather in the highlands is also a nice break from the hot and humid climate of the lowlands of Borneo.

The Upper Krayan area is part of a highland plateau between 900 and 1,000 meters. The area is intersected by sandstone valleys surrounded by mountains with gentle slopes. The cooler climate is a pleasant change from the hotter and more humid lowlands. There are some extensive areas of heath forest with its distinctive vegetation of orchids (including the famous black orchid), brightly colored rhododendrons, nepenthes, and agathis trees from where people used to collect resin.

**Environmental Service**: Ecotourism development and protection of biodiversity

**Environmental Service Providers/Suppliers**: Local communities who will be organized into community-based ecotourism operators

**Environmental Service Buyers**:

a. Tourism entrepreneurs, such as restaurants, and travel agents; and
b. Visitors/tourists, homestay and travel agents, where PES will be incoporated in entrance fees, meal receipts, transporation, accomodation, and other services.

**PES Mechanism**: With the help of the project, the villagers residing in the buffer zone of Kayan Mentarang National Park, particularly those in the Krayan Hilir, Krayan Tengah and Krayan Darat, will be tapped in undertaking protection of the forests (and corresponding biodiversity) surrounding their communities and customary areas. The protection scheme will be built on their traditional belief and practices, particularly those that relate to local forest protection, rehabilitation, and conservation schemes.

A Krayan Hulu Ecotourism Committee has already been organized, where they started offering home stay accommodation to tourists and enjoy a friendly atmosphere with local host family in Long Layu, Tang Laan, and Tanjung Pasir. In 2003, the local ecotourism committee became a small NGO called TANA TAM KRAYAN HULU, which means 'our land of Krayan Hulu'. The organization maintains contacts with community organizations across the border in Sarawak and Sabah, and together they are developing cross-border ecotourism. TANA TAM KRAYAN HULU has also opened a small-office and souvenir shop in the coastal town of Tarakan, the largest town in the northern part of East Kalimantan. Tarakan is connected by plane daily to Balikpapan and Jakarta, and weekly to the Krayan highlands (Long Bawan, Long Layu Villages).

The project will help strengthen further this local ecotourism organization to offer a more environment and culturally-friendly ecotourism products, services and facilities. Existing natural and archaeological attractions and destinations will be developed (with protection and preservation on top of the agenda) and once fully operational, this will provide a steady source of income to the local community. Their services will be compensated from the fees that the visitors and tourists will pay for food, accommodation, experiences, services, etc. that they will provide.

Some of the existing attractions[72] that will be developed are:

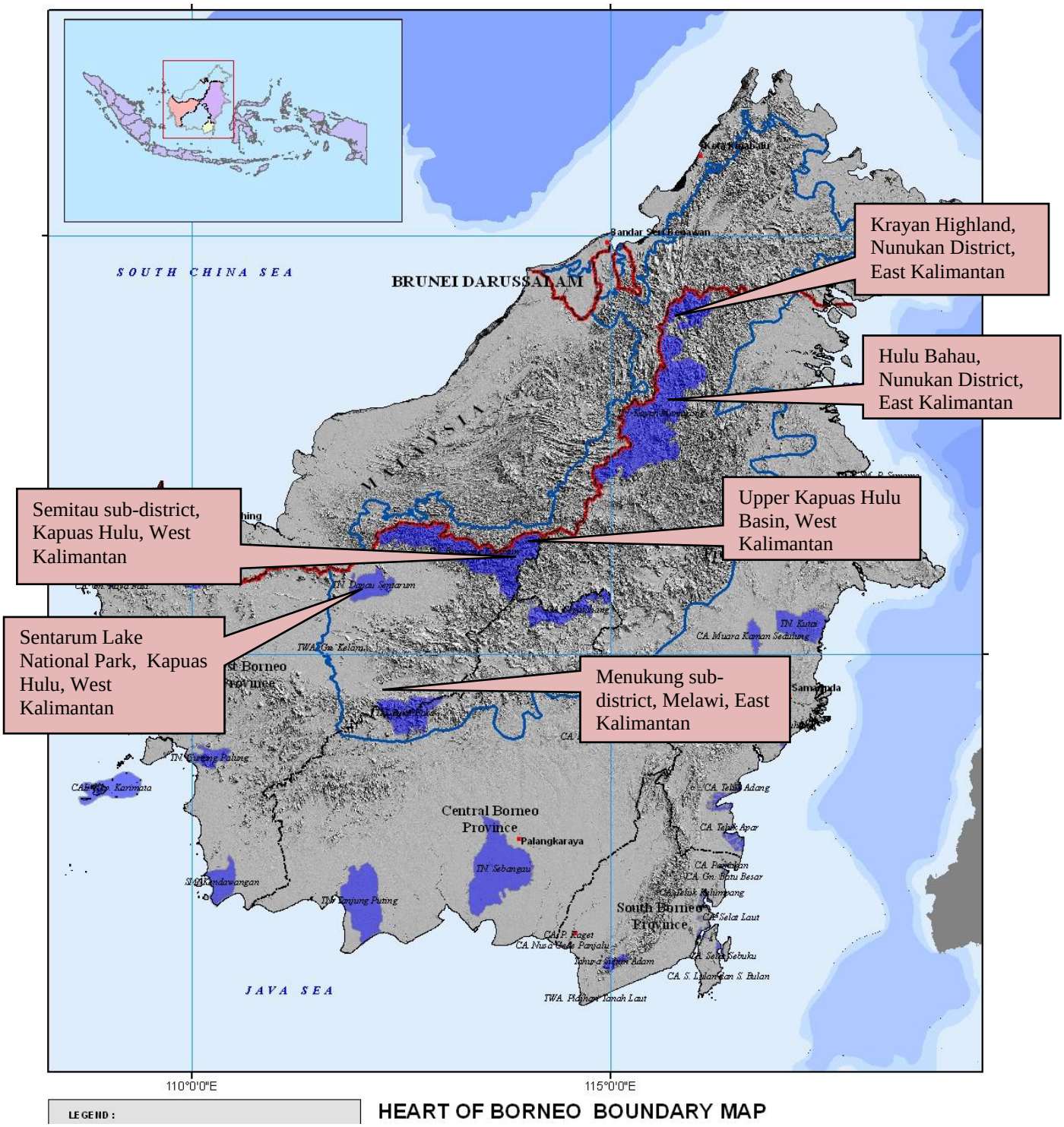
a. Batu Sicen/The Honey Rock. Not far from the settlement of Tanjung Pasir, a rock complex about 40 meters high arises from amidst a pristine forest. It is a place rich in biodiversity and history. There are several bat caves and old burial sites. The highest point is called Honey Rock and takes its name from the honey bees nestled right beneath the peak. The view from the top over the forest and stretching out to the distant ridges is splendid. The tour of the Honey Rock takes a full day leaving from the village of Long Rungan. The first part of the tour is by motorized canoe, followed by a trek in the forest. The trek is of easy to medium difficulty, with some climbing at the top. A safety rope is in place. Expert local guides will accompany the tourists.
b. Rice Paddies History Walk. A perfect way to fill half-a-day or a couple of hours and see up close how traditional agriculture has helped carve beautiful enclaves in the landscape is to take a tour of the rice paddies around the old site of Pa' Upan (to the north of the current settlement) or around the old site of Pa' Kaber (to the south of the current settlement), or trek through the Puneng Ita' area in Long Rungan. A local person will guide you through the history of the area (there are some ancient stones and old sites) and the production cycle of the famous adan and black rice, renowned local rice varieties. If it is fruit season, you will have the time of your life!
c. Krayan River Rapid. Between Tang Laan and Tanjung Pasir, the Krayan River is interrupted by an impassable rapid. The water flows tumultuously in the gorge. There is an impressive carving of a human figure on a rock by the side of the rapid (Paru' Ating). Further down, past the gorge, the river opens up to forms a large pool with small cascades. The site can be reached by motorized canoe in 1 hour from either Tanjung Pasir (downriver) or Tang Laan (upriver). There is a short walk on a forest trail along the river to bypass the rapid. The location is perfect for a picnic and a swim in the river.
d. Long Kerunan Archaeological Site. Following a comfortable trail, a 2-hour walk from Long Layu, there is an ancient burial ground with several stone burials still standing. Not far from there, a big stone carved with two human figures rises from the bank of the Kuyur River as if guarding the place. The site is along the route bound for the border with Sarawak (Malaysia).

[72] Source: http://www.borneo-ecotourism.com/krayan.swf.

e. Long distance and cross boundary trekking. A variety of trekking tour and long-distance expeditions can be carried out following the trails that connect the villages in the Krayan, and across the border to Malaysia. From Long Layu, a 2-day hike takes visitors past a main salt spring into Bario or the Kelabit Highlands. This trail is often used by local people to go to Malaysia for the purpose of trade, work, or visit. Another possibility is a 5-day expedition through old forest, grasslands, and old village sites of the Sa' ban people from Krayan Hulu to the Upper Bahau area (Apau Ping).

f. Salt making. Salt-making is a characteristic activity in the Krayan area. In the olden days, the salt from Krayan was sought after by the Dayak people of the interior and traded in exchange for prestige items. The salt is used to preserve meat, as a medicine and tonic. In Krayan Hulu, the salt is extracted through boiling from the water of salt springs found in small streams and on hill sides. Two active salt production sites exist in the vicinity of Long Layu and can be visited: Main Alen and Main Raye.

**Location Map of Potential PES Sites**



**ANNEX J. INITIAL REVIEW OF PROJECTS WITH REDD+ SITE LEVEL ACTIVITIES IN KALIMANTAN**

Information on project coordination with various initiatives is provided Part II, Section C. In addition, the following site based projects have been identified in the Kalimantan. During the project inception phase and site selection process, further consultation with these projects will be undertaken to ensure that project sites to don't overlap and activities are synergistic.

| Projects/Agencies/Institutions | Carbon Emission-Related Activities and Objectives |
|---|---|
| 1. Rimba Raya Carbon Project in Seruyan District, Central Kalimantan by the Infinite Earth, PT.Semboja Lestari; OFI (Orang Utan Foundation International). Funded by Shell Canada, Gazzprom (Rusia) | An estimated of 96,376,455 t $CO_2$e avoided. |
| 2. Lamandau Wild Refuge, Central Kalimantan REDD implemented by Orang Utan Foundation UK, ICRAF, Rare Conservation, The Clinton Climate Initiative-Forestry, Yayorin. | The peat soils of the buffer zone contain approximately ten times as much carbon as 841 t/ha |
| 3. Sungai Putri Avoided Deforesttation, Ketapang, West Kalimantan by FFI. PT Macquarie Capital, and Yayasan Riak Bumi, Yayasan Titian, PT Sinarmas | The project estimates that the equal total avoided emissions over 30 years is 222,9 M $tCo_2$ in Kapuas Hulu |
| 4. Malinau Avoided Deforestation Project by the Global Eco Rescue. PT Inhutani II, Malinau Regency | With an estimated 1.1 million $tCO_2$e per year, 25-year project |
| 5. Berau Forest Carbon Program by the Nature Conservancy | Stocking the estimated 5,000,000 tons of carbon |
| 6. West Kalimantan Community Carbon Pool by the FFI, David and Lucile Packard Foundation | Avoided deforestation, avoided degradation, reforestation |
| 7. Mawas Peatland Conservation Area Project by the Borneo Orangutan Survival Foundation. The Dutch Royal Government. Funded by Shell Canada | The estimation of the total carbon offsets reach 43.268.639 tons $CO_2$ over the life of the project |
| 8. Katingan Conservation Area: A Global Peatland Capstone Project by the PT Rimba Makmur Utama and the Clinton Initiatives | Potentially 1.8 million mT $CO_2$ emissions avoided annually |
| 9. Kalimantan Forests and Carbon Partnership (KFCP) by the Australian Government IAFCP | Avoidance of $CO_2$ emissions |
| 10. Central Kalimantan Peatland Project, Sebangau – REDD by the World Wide Fund for Nature. Deutsche Post. BOS Mawas Program. Wetlands Int'l Indonesia Program. Care Int'l Indonesia. Palangka Raya University | Avoidance of $CO_2$ emissions |