



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

## PART I: PROJECT IDENTIFICATION

<b>Project Title:</b>	Mainstreaming Biodiversity Conservation and Sustainable Use into Inland Fisheries Practices in Freshwater Ecosystems of High Conservation Value		
<b>Country(ies):</b>	Indonesia	<b>GEF Project ID:<sup>1</sup></b>	5759
<b>GEF Agency(ies):</b>	FAO	<b>GEF Agency Project ID:</b>	628698
<b>Other Executing Partner(s):</b>		<b>Submission Date:</b>	March 21, 2014
<b>GEF Focal Area (s):</b>	Biodiversity	<b>Project Duration (months):</b>	48
<b>Name of parent program (if applicable):</b>	N/A	<b>Agency Fee (\$):</b>	588,306
<ul style="list-style-type: none"> <li>• For SFM/REDD+ <input type="checkbox"/></li> <li>• For SGP <input type="checkbox"/></li> <li>• For PPP <input type="checkbox"/></li> </ul>			

## A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-Financing (\$)
BD-2 Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors/ BD 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks	GEFTF	6,192,694	31,106,000
<b>Total project costs</b>		<b>6,192,694</b>	<b>31,106,000</b>

## B. PROJECT FRAMEWORK

<b>Project Objective:</b> Strengthening the management framework for sustainable use of inland aquatic biodiversity to increase the protection of high conservation-value freshwater ecosystems in Indonesia						
Project Component	Grant Type <sup>3</sup>	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1. Mainstreaming of inland aquatic biodiversity into resource development and management policy	TA	1.1 Critical knowledge on the aquatic biodiversity of inland waters, including the inland fisheries sector, incorporated into sector policies and development plans, river basins, lagoons and associated communities  Indicator: - Area (in square	1.1.1 Improved land management plans, including forestry and pollution controls, covering approximately 3,000 square km of critical inland aquatic ecosystems in Kalimantan, Java and Sumatra.  1.1.2 Sector policies and development plans reviewed and revised, and legal framework for inland aquatic resource extraction strengthened and incentives for enforcement developed	GEFTF	800,000	5,733,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the reference attached on the Focal Area Results Framework and LDCF/SCCF Framework when completing table A.

<sup>3</sup> TA includes capacity building and research and development.

	<p>kms) of critical inland aquatic ecosystems under sustainable management practices, with a target of 3,000 km<sup>2</sup>.</p> <p>1.2 Strengthened capacities of national and local environmental and fisheries professionals as well as local communities to address threats to inland aquatic ecosystems, including inland fisheries</p> <p>Indicator: - Number of communities and professionals trained on SM of inland fisheries, with a target of 15 communities and 20 professionals</p> <p>1.3 Improved multi-ministry/agency communication and collaboration on management of inland aquatic ecosystems.</p> <p>1.4 Improved biodiversity status of three key inland fish species.</p> <p>Indicator: Stocks of threatened aquatic species (i.e. dragon fish, dagger fish, Indonesian eel) increased by 20% in target areas in Kalimantan, Java and Sumatra</p>	<p>1.2.1 Capacity building plan for sustainable management of inland aquatic resources developed and mechanisms for implementation identified</p> <p>1.2.2 At least 20 environment and fisheries professionals from relevant ministries, the private sector and academia trained in sustainable management of inland fisheries</p> <p>1.2.3 15 Local communities including 3,000 fishers and 1000 fish farmers trained to implement five land-use plans covering 60,000 ha of critical inland aquatic ecosystems</p> <p>1.3.1 Multi-agency coordination mechanism established on fresh water ecosystem management at central level and in each participating Province lead by the fishery sector with participation of agriculture, forestry, and environment sectors</p> <p>1.4.1 Implementation of revised sector policy and land use plans in critical inland aquatic ecosystems in Java, Kalimantan and Sumatra</p>			
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<p>2. Demonstrations of conservation and sustainable use of inland aquatic biodiversity</p>	<p>INV</p>	<p>2.1 Rural communities pursue improved livelihoods through better fisheries production and conservation in 5 pilot areas including 1,050 households on 60,000 of land and wetland habitat</p> <p>Indicators:</p> <ul style="list-style-type: none"> <li>- Number of pilot projects implemented</li> <li>- Number of best practice manuals developed</li> </ul> <p>2.2 Improved capacity for conservation and market access developed for key inland fishery resources through fishery value chain analysis of two eel fisheries</p> <p>Indicator:</p> <ul style="list-style-type: none"> <li>- Guidelines for certification for eel fisheries developed and disseminated</li> </ul>	<p>2.1.1 Implementation of 5 land-use plans in pilot communities and establishment of demonstrations including investments on:</p> <ul style="list-style-type: none"> <li>• Aquaculture management on Jambi peatlands, Sumatra and Central Kalimantan peatland near Pulang Pisau;</li> <li>• Capture fisheries practices in Berbak and Denau Ramsar sites in Sumatra, and the 'beje' system in central Kalimantan;</li> <li>• Integrated land management, including forest practice and pollution control, to conserve biodiversity in the Serayu and Pelabuhan Ratu River catchments in Java;</li> <li>• Analysis of Java Fish passage structures and water discharge in connection with dam development that incorporates biodiversity concerns in the Serayu River and Pelabuhan Ratu drainage system</li> </ul> <p>2.1.2 Best-practice manuals for conservation and sustainable use of inland aquatic biodiversity developed based on the evaluation of demonstration activities under 2.1.1</p> <p>2.2.1 Inland fisheries value/supply-chain analyzed for river eel fisheries on Serayu River and Pelabuhan Ratu catchments</p> <p>2.2.2 Pre-assessment of certification for eel fisheries on Serayu River and Pelabuhan Ratu catchments</p> <p>2.2.3 guidelines for certification or ecolabelling developed for eel fisheries on Serayu River and Pelabuhan Ratu catchments</p>	<p>GEF TF</p>	<p>3,801,250</p>	<p>4,450,000</p>
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3. Monitoring and assessment of inland aquatic biodiversity	TA	<p>3.1 Capacity to assess and monitor inland aquatic biodiversity improved at national and local levels for the three islands in the project area in Kalimantan, Java and Sumatra</p> <p>Indicators:            -Percent of wetland areas in project area mapped, with a target of 90%;            -Number of species not identified to species in national reporting reduced to 10%</p>	<p>3.1.1 A comprehensive species identification guide for inland aquatic biodiversity developed and translated to local and English languages</p> <p>3.1.2 Data collection and monitoring system established that includes inventories of aquatic biodiversity of habitats in the 5 pilot areas and the mapping of wetlands in Kalimantan, Java and Sumatra.</p> <p>3.1.3 National and local stakeholders (200) trained in assessment and monitoring of inland aquatic biodiversity at SEAFDEC Centre in Palembang</p>	GEF TF	1,096,554	19,123,000
4. Project monitoring and evaluation and adaptive learning	TA	<p>4.1 Project implementation based on adaptive results-based management and sharing of best practices and lessons learnt</p> <p>Indicator:            -Adaptive learning plan developed and under implementation</p>	<p>4.1.1 Project monitoring system monitors project outcomes and outputs M&amp;E system operating and used for adaptive project management</p> <p>4.1.2 Mid-term and terminal evaluations carried out and reports available</p> <p>4.1.3 Lessons learnt documented and shared through project dissemination plan and existing national mechanisms</p>		200,000	900,000
Sub-Total					5,897,804	30,206,000
Project management Cost (PMC) <sup>4</sup>					294,890	900,000
Total project costs <sup>4</sup>					6,192,694	31,106,000

<sup>4</sup> To be calculated as percent of subtotal

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Ministry of Marine Affairs and Fisheries	In-kind	24,406,000
National Government	Ministry of Research and Technology BPPT	In-kind	3,000,000
Local Government	Provincial Departments in Java, Kalimantan, and Sumatra	In-kind	500,000
NGO	Borneo Institute	In-kind	200,000
Academia	James Cooke University (Australia)	In-kind	200,000
GEF Agency	FAO	In-kind	2,500,000
		Cash	300,000
<b>Total Co-financing</b>			<b>31,106,000</b>

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA(S) AND COUNTRY<sup>1</sup>**

GEF Agency	Type of Trust Funds	Focal Area	Country Name/ Global	Grant Amount (\$ (a)	Agency Fee (\$) (b) <sup>2</sup>	Total (\$) c=a+b
FAO	GEFTF	BD	Indonesia	6,192,694	588,306	6,781,000
<b>Total Grant Resources</b>						<b>6,781,000</b>

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

<sup>2</sup> Indicate fees related to this project.

**E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>**

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

Amount Requested (\$)      Agency Fee for PPG (\$)<sup>6</sup>

- No PPG required
- (Upto) \$50k for projects up to & including \$ 1 million
- (Upto) \$100k for projects up to & including \$ 3 million
- (Upto) \$150k for projects up to & including \$ 6 million
- (Upto) \$200k for projects up to & including \$ 10 million
- (Upto) \$300k for projects above \$ 10 million

200,000

19,000

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

Type of Trust Funds	GEF Agency	Focal Area	Country Name/ Global	PPG (\$) (a)	Agency Fee (\$) (b)	Total (\$) c=a+b
GEFTF	FAO	BD	Indonesia	200,000	19,000	219,000
<b>Total Grant Resources</b>						

<sup>5</sup> On exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

## PART II: PROJECT JUSTIFICATION

### Project Overview:

#### A.1. Project Description.

##### 1) The global environmental problems, root causes and barriers that need to be addressed

Globally, inland aquatic biodiversity is one of the most threatened groups of organisms used by humanity and inland aquatic habitats are being lost and degraded largely as a result of human activities. The majority of these threats arise from habitat degradation and competing uses of freshwater by other sectors. With the human population expected to reach 9 billion by 2050 and increased needs for food and power, threats to inland aquatic biodiversity will become greater. Illegal, unregulated and unreported fishing (IUU) also contributes to endangering inland fishery resources. In efforts to produce more food from terrestrial agriculture, wetlands have been drained, water has been diverted for irrigation and inland ecosystems have been further degraded.

Indonesia is an archipelago country with approximately 247 million people. Population growth as well as economic development has put pressures on the country's natural resources. Through water development programmes and irrigation schemes, Indonesia has been able to increase food security, as measured through rice production, and generate electricity, but at a cost of inland aquatic biodiversity. Ill-advised land management practices primarily around peatlands have contributed to a further loss of biodiversity, as well as loss of livelihoods for many rural populations dependent on aquatic ecosystems.

Indonesia has an abundance of biological diversity and is well known for its terrestrial species, e.g. orangutan, and marine species, e.g. coral reefs. However, less well known, but tremendously important and often threatened, is Indonesia's freshwater biodiversity. For example, the world's smallest vertebrate is an endangered species of fish (*Paedocypris progenetica*) that lives in and around the peatlands of Indonesia. Indonesia has several species of diadromous eel (Indonesian eel or River eel, *Anguilla bicolor* and *A. marmorata*) that support local fisheries and are harvested by foreign fishers, often illegally. Eel populations around the world are declining, yet the demand for glass eels (i.e. young eels also known as elvers), and eel for sushi is globally increasing. The Asian arowana (*Scleropages formosus*), also known as the Dragon fish, is a highly valued aquarium fish that occurs in Indonesian freshwaters. Due to loss of habitat and uncontrolled harvest for the aquarium industry, this species is highly endangered and listed in Appendix A of the Convention on International Trade of Endangered Species of Fauna and Flora (CITES). Another popular aquarium fish on the world market and the basis for the Indonesian speciality 'pempek', the featherback or dagger fish, *Chitala chitala*, is also threatened by habitat loss and overfishing. Pempek is now often being made of lower quality species of fish due to the shortage of the dagger fish. However, harvest and status of all of these species are not specifically reported in Indonesia's official country statistics to FAO.

Inland aquatic biodiversity, e.g. fishes, crustaceans, molluscs and plants, provide food security, livelihoods, and cultural heritage throughout the Indonesian archipelago. The wetlands of Indonesia further provide carbon sequestration, flood control and other important ecosystem services. The peatlands of Indonesia are a special habitat that have for millennia provided carbon sequestration and a habitat for unique biodiversity. However, recent attempts to drain the wetlands for agriculture have resulted in loss of native biodiversity, increased greenhouse gas (GHG) emission, failed agriculture, degraded ecosystems and displaced local people.

Historically Indonesia contained approximately 25 million ha of peatlands and currently contains approximately half of the world's tropical peatlands. However, draining agriculture has reduced the area of intact peatland to less than 15 million ha and has deprived many aquatic species of critical habitat as well as increasing GHG emissions and decreasing important species of plants and trees. Local communities harvested the featherback, arowana and other species of freshwater fishes from the peat swamps and flooded forests. Often peatlands were drained to provide for agriculture, e.g. oil palm or rice. However, the agriculture was generally not sustained and at the same time the local aquatic biodiversity that provided food and livelihood was lost.

Seasonal lakes in Indonesia and coastal lagoons further provide unique habitats for fish, water fowl and other biodiversity that take advantage of the ebb and flow of freshwaters. Shorebirds, proboscis monkeys, aquatic species and migrating birds use the temporary water bodies for food, shelter and nesting areas. Local people also harvest this biodiversity when water levels facilitate the harvest.

Indonesia has formally recognized the value of wetlands and the biodiversity they support by signing the Convention on Wetlands (Ramsar Convention) on 8 August 1992. Indonesia presently has 6 sites designated as Wetlands of

International Importance, with a surface area of 964,690 hectares. Several of these wetlands include peatlands, fishery resources and indigenous communities, e.g. Danau Sentarum in West Kalimantan; Berbak National Park on Sumatra; and Rawa Aopa Watumohai National Park on Southwest Sulawesi. By designating these areas as "Ramsar Sites" the Government of Indonesia agrees to manage and protect them.

Inland aquatic ecosystems not only support aquatic diversity, but they provide habitat and food for terrestrial and avian biodiversity as well. Waterfowl and riparian ecosystems rely on wetlands for nesting sites, water and nutrients, peatlands act as water containers capable of supporting fish and also restoring ground water-tables. Rivers and migrating fish provide a crucial link to the marine environment that allow for the cycling of nutrients. Thus, the little known biodiversity of aquatic systems support many of the iconic species in terrestrial ecosystems, e.g. waterfowl, forests and primates.

However, accurate information on the status and value of freshwater ecosystems and their resources is lacking. There is a lack of understanding of the full range of ecosystems services provided by freshwater ecosystems that include not only the provisioning of fish through capture fisheries, but regulatory services such as carbon sequestration, supporting services such as nutrient transport and cultural services such as aesthetics. As a result, conservation of wetlands and the biodiversity contained therein is often not well considered in government planning, development and management.

Over 50 taxa are reported as being harvested from the inland waters of Indonesia with a total weight of 368,578t. However, over 83,000t of this production is not identified to species. These production figures are thought to be very much under-estimated. The inland fisheries of Indonesia, as in many countries, are extremely difficult to manage due to their location in many remote areas, lack of formal landing sites, part-time or seasonal nature of the fishers, and failure to enter the formal economy, i.e. many products are for subsistence or are bartered locally. The numbers of rural people involved in fishing activities is also not well known. Official FAO statistics estimated in 2004 the number of people directly involved at around 500,000, but this did not include numbers of part-time and subsistence fishers. These inaccurate estimates, however are far below the numbers thought to be involved in inland fisheries and aquaculture. Therefore governments often believe that investing in management, monitoring and enforcement of inland fisheries is not cost effective.

Market forces are currently gaining popularity as a mechanism to promote sustainable fisheries through ecolabels and certification, e.g. the Marine Stewardship Council and the Forest Stewardship Council. Although most of Indonesia's inland fishery resources are consumed locally and not exported (as is the case in most of the developing world), a few species are exported. The Indonesian eel or river eel (*Anguilla spp.*) is fished by locals and by those exporting to other countries in Asia. On occasion the harvest and export of eel is illegal. However, analysis of the supply chain, e.g. harvest, traceability, chain of custody, processing and distribution has not been undertaken. Eel populations are declining around the world leading to an increase in their value, thus providing incentive for continued illegal or over fishing. FAO has recently established international guidelines for the ecolabelling of fish and fish products for both marine and inland capture fisheries, and for aquaculture certification. Moving inland fisheries that have export potential toward certification or ecolabels could provide another avenue to conserve aquatic biodiversity and ecosystems.

In terms of management practices, aquaculture is gaining importance globally and in Indonesia with rapid increase in reported production starting in 2009. Inland aquaculture in Java, Kalimantan and Sumatra provides food, export potential and jobs for local populations. However, there is concern that aquaculture growth is not being regulated, that pollution from uneaten food, disease and escaped alien species could degrade the environment, and that many aquaculture facilities are not licensed. Good farming practices would significantly reduce threats to aquatic biodiversity and are being used by some fish farms in Indonesia. More control and oversight is needed however to ensure aquaculture grows without endangering native biodiversity.

### **Project area**

The sites selected for this project represent a range of wetland habitats and globally important inland aquatic biodiversity. They include peatlands, seasonal lakes, river basins and coastal lagoons. Rural communities and indigenous people rely on and often impact these ecosystems and biodiversity. The sites on Java and Sumatra represent coastal lagoons connected to inland water bodies where eels must transit to and from their spawning sites. These lagoons are areas of heavy human influence that can disrupt the migration by overfishing and pollution. The peatlands of Kalimantan

are unique habitats of acid water rich in organic material. The peat swamps and forests support unique fish and plant life that have evolved to survive under such conditions.

Danau Sentarum in West Kalimantan; Berbak National Park in Sumatra are Ramsar sites selected for this project. Berbak contains undisturbed peat swamp forest (115,000ha) and freshwater swamp forest (45,000ha), dissected by a large river and inhabited by a small group of native people. The forests are inundated for most of the year. In the dry season, brackish water penetrates up to 10km upstream. The site supports more than 150 tree species and over 34 species of fish, and is an important area for staging shorebirds. Three endangered species of birds (Storm's Stork, White-winged Wood Duck, and Hornbill), eight species of notable mammals (including the Sumatran Rhino, Tapir, Tiger and Malayan Sun Bear) and two species of notable reptiles (Estuarine Crocodile and False Gharial) are found here. Coastal mudflats located outside the reserve are important feeding grounds for waterbirds.

Danau Sentarum contains a series of seasonal freshwater lakes, connecting rivers, peat and freshwater swamp forest and is the last vast area of primary freshwater swamp forest remaining in Kalimantan. Over 185 species of fish and 200 species of birds are present.

The Serayu River and Pelabuhan Ratu catchments support migrating populations of eel and other important migratory fish. Both areas are heavily influenced by human activity including agriculture, wood processing and hydro-electric development. As a result, aquatic ecosystems have been degraded and biodiversity threatened. During the PPG phase a more comprehensive analysis of fishers, land use and threats to biodiversity will be developed.

Freshwater and inland aquatic ecosystems are vital for human survival and therefore competition for land and water use can be severe. Wetlands have been and are being drained to provide space for agriculture; hydro-electric development and construction of dams has blocked critical migration routes for eels and other species of migratory fish; poor land management practices are causing silt and land-based pollutants to enter aquatic ecosystems; and finally use of unsustainable fishing practices are directly threatening aquatic biodiversity. Improved operations and management of these sectors will be required.

Against this background, Indonesia is seeking GEF assistance to address the main threats to its inland aquatic biodiversity and to remove the main barriers to conservation and sustainable use of its inland waters, which include:

1. **Weak knowledge base and capacity** to assess the status of and risks to inland aquatic ecosystems. Due to the dispersed and remote nature of inland fisheries and the fact that these resources are often perceived to be of low value, few resources are devoted to improving the information and knowledge on inland aquatic biodiversity. Fishers are often part-time or subsistence and not required to report on their harvest. Local and national governments furthermore do not regard the sector as sufficiently important to justify monitoring and surveillance. In light of the fact that other sectors as well as the fishery sector, impact inland aquatic biodiversity, it is difficult to assess accurately the multitude of threats. This is compounded by the fact that data recording, management and interpretation systems are generally lacking. There is furthermore a lack of appreciation of the role that aquatic biodiversity plays in supporting terrestrial biodiversity, e.g. forests, waterfowl and other animals.
2. **Weak governance framework** for management of inland aquatic ecosystems and their associated fisheries. Indonesia has no restrictions on fishing gear or techniques for inland fisheries. Thus, destructive and harmful fishing techniques are permitted on inland waters, whereas on marine waters legislation against such practices does exist. Inland fisheries in Indonesia fall under the mandate of the Ministry of Marine Affairs and Fisheries (MMAF), whereas issues of conservation is within the mandate of the Ministry of Environment (ME). To conserve, develop and manage inland aquatic biodiversity, a cross sectoral and multi-agency approach is needed to address ecosystem-level management issues.
3. **Validated management practices** for inland fisheries and associated ecosystems have not been established in most of Indonesia. Whereas marine fisheries management includes *inter alia* catch quotas, restricted fishing zones and gear restrictions, no such quotas or restrictions are in place for inland fisheries. Land use management



plans may exist in some areas, but awareness and enforcement of the regulations is lax, often due to the remote areas involved or influence of certain resource users. Best management practices and international guidelines on responsible inland fisheries, aquaculture and forestry exist, but often have not been adopted at national level, let alone at the local level. These guidelines and best practices will be replicated in the project areas.

## **2) Baseline scenario and associates baseline projects**

The Government of Indonesia has been investing hundreds of millions of USD in recent years to address threats to its freshwater ecosystems:

- Indonesia has adopted the 2003-2020 Indonesian Biodiversity Strategy and Action Plan (IBSAP) and biodiversity concerns are being mainstreamed in the Sectoral Strategic Plans of the Ministry of Marine Affairs and Fisheries, and Indonesian Strategy and Action Plan for Wetland Management.
- The Government of Indonesia has established two Ramsar sites within the project area, but attention to management of aquatic biodiversity and inland fisheries has not been a priority to date. A National Park Authority was established in 2006.
- As a Member of FAO, MMAF collects statistics on production and value from inland aquaculture and on quantity of inland fisheries. These data are regularly reported to FAO every two years, however several gaps in information exists, e.g. identifying inland species and reporting on stock enhancement.
- Presidential Working Unit for Supervision and Management of Development (UKP4) was established to oversee and coordinate development projects on biodiversity and REDD+.
- The five-year, \$600 million MCC compact is designed to reduce poverty through economic growth. The compact's three projects are expected to increase household income in project areas through increased productivity, reduced energy costs, and improved provision of public sector growth-enhancing goods and services.
- The Government of Indonesia has committed land, funds and staff towards the establishment of a SouthEast Asia Fishery Development Center's (SEAFDEC) Inland Fisheries Facility in Palembang, Sumatra. Government of Indonesia donated 1.2 Million for the construction of the facility. Within the Ministry of Marine Affairs and Fisheries the government has established a Research Institute for Inland Fisheries, a Research Center for Fisheries Management and Conservation, and an Agency for Marine Affairs and Fishery Research and Development.
- Indonesia has proposed a 'One Map' policy to bring together information on habitat, wetlands, including peatlands and biodiversity. The National Cartographic Agency (BIG) has been put in charge of implementing the policy.
- Following Presidential Instructions, a Master Plan has been developed to reforest and rehabilitate degraded peatlands that had been drained in 1995 for rice production in a disastrous 'Mega Rice Project'.
- Agency for the Assessment and Application of Technology (BPPT) is a non-government agencies department under the coordination of the Ministry of Research and Technology which has the task of carrying out government duties in the field of study and application of technology. Relevant ongoing activities to the project include Monitoring, coaching and service to the activities of government agencies and private sector and the application of technology assessment in the context of innovation, diffusion, and capacity development, and fostering technology transfer in the area of mapping Indonesian wetlands, especially peatlands, and coastal areas.

Joint activities with other institutions include:

- INDESO project: France planned to provide a soft loan of 30.2 million US dollars' worth of Infrastructure Development of Space Oceanography" (INDESO) project to monitor Indonesia's marine ecosystem. The project is mapping Indonesia's coastal areas and existing plans are to examine appropriate coastal aquaculture locations. Although inland aquatic ecosystems are not included in the existing project, informal discussions with INDESO and Indonesian staff indicate mapping of inland waters could be arranged.

- The Borneo Institute (Kalimantan) is working with a consortium of local communities on 'beje' fisheries and other livelihood activities that utilize and therefore conserve native aquatic biodiversity and associated ecosystems.
- James Cook University (Australia) currently has on-going research projects in Kalimantan on natural resource management, conservation of biodiversity and community mobilization. A graduate programme on international Development Practice is staffed by Indonesian scientists who wish to collaborate with the proposed GEF project.

Private industry has established fish farming activities near the project area:

- Aquafarm Nusantara, a private fish farming company located on Lake Toba, Sumatra, is a thriving business that is promoting responsible aquaculture. Aquafarm Nusantara conducts water quality assessment and community demonstration of best farming practices. Although Lake Toba is not planned as a demonstration site, Aquafarm Nusantara is interested in aquaculture extension to planned demonstration sites.

Several local community groups and international and local NGOs are operating in the project area. In the Jambi peatlands (Sumatra) local communities and local NGOs e.g. Indonesian Conservation Community, are active in using and attempting to conserve aquatic biodiversity in association with other activities; a local NGO has petitioned the government to stop issuing licenses for use of peatland for oil palm plantations. Approximately 300 fishers currently fish the peat swamps. In the peatlands of Pulang Pisau (Kalimantan), over 2000 people fish the peatlands, whereas the 'Beje' fisheries in other areas of Kalimantan support approximately 2135 people. Several NGOs including Walhi Kalteng, Save our Borneo, Yayasan Betang Borneo, Sarekat Hijau and Lembaga Germawan are also active in the island. The Borneo Institute represents rural communities on Kalimantan to promote sustainable food production in areas previously degraded by poor land-use practices. Fishery experts associated with the institute will provide local contacts and advice to the proposed project. Further refinement of how to engage these and other groups will be developed during the PPG.

In the Serayu and Pelabuhan Rata River Basins (Java) approximately 500 fishers are engaged in harvest of river eels and eel larvae (elvers or 'glass eels'). A significant portion of the eel and glass eel harvest is exported, however there are no local regulations governing the fisheries and amount of export is not well known. The Marine Affairs and Fisheries has legislation regarding the size, but not the quantity, of glass eels that can be exported.

WWF Indonesia has supported two Ramsar's sites, Danau Sentarum National Park in West Kalimantan and Danau Biru in Wasur National Park-Papua through sustainable watershed management approach. Other local groups, government agencies and NGOs will be identified during the PPG phase.

There is significant fishery activity in the lakes, rivers and peat swamps of the Danau Sentarum Ramsar site in Kalimantan. The lakes support a large traditional fishing industry. The western part of the upper Kapuas floodplain is inhabited by almost 20,000 people, 88% of which are Malay fishermen. About 3,000 people live in about 20 village enclaves within the Park. A seasonally fluctuating population lives on the site depending on fisheries, which provide 3,000 wet tonnes annually, for their livelihood. A field management and research centre are located in the reserve. Other human activities include cultivation and traditional harvest of forest products.

FAO's support to conservation and sustainable use of inland fisheries of relevance to this Project, includes:

- Indonesia – FAO/Norway Reduction of Greenhouse Gas Emissions in Indonesia through rehabilitation of peatlands and improved fishery and forestry production. This project under development with the Indonesian REDD+ Programme funded by Government of Norway will be composed of two components, 1) on national mapping and information collection on peatlands and surrounding wetlands and 2) focused management interventions in Kalimantan in fisheries, aquaculture and forestry for improved food production and fire control. The proposed budget is \$7.5 million of which 2 million will contribute to co-financing.

- Based on FAO 's experience in fire management and climate smart agriculture UKP4, requested FAO to develop and implement in 2013 a project to reduce wildfires and GHG emissions in the Ex MegaRice Project region in Central Kalimantan. Activities in the following areas were developed in 4 pilot villages:
  - Micro water management, lifting water levels to wet the peatlands and bring water more accessible to agriculture. Local population hoped that this would also increase fishery and aquaculture potential.
  - Diversification of agriculture which could include aquaculture and culture-based fisheries
  - Prevention of and awareness raising on fires in the community rubber plantations
  - Develop alternative economical activities like mushroom production by women
- Technical Cooperation Programme Project (TCP) entitled, 'Development and Management of Inland Aquatic Biodiversity in Indonesia' will be implemented and contribute \$300,000 in co-financing.
- Regular programme activities to improve inland fishery statistics, species identification and fishery management are ongoing by FAO staff in Rome and in the Regional Office for Asia and the Pacific.
- FAO PIPELINE: Strengthening the Capacity of Water User. Associations (WUAs) in Indonesia - Objectives : The specific objectives are : (1) To establish institutional networking and self-help of the WUAs; 2) To improve technical capacity and economic conditions of WUA members; 3) To improve management capacity of WUAs managers in order to be able to participate in the process of policy making either at field level or institutional level.

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

In the proposed alternative scenario, overall, this proposed project would for the first time systematically address conservation and sustainable use of Indonesia's inland aquatic biodiversity to contribute to food security and to conserve biological diversity. By addressing land use with an emphasis on inland fisheries aquatic biodiversity the project will bring together stakeholders in a cross-sectoral approach to conserve and sustainably use aquatic biodiversity.

#### ***Component 1. Mainstream inland aquatic biodiversity into resource development and management policy***

This component will ensure that critical knowledge on the aquatic biodiversity of inland waters, including the inland fisheries sector, is incorporated into sector policies and national development priorities. In order to achieve this, a national level analysis and assessment of risks facing the inland aquatic ecosystems of Indonesia will be undertaken. Further analysis of current policies and legislation that would address the identified risks, plus an analysis of where information, policies or legislation is missing will be undertaken. The project will establish a multi-agency coordination mechanism on management of fresh water ecosystems that will involve AMAF, Ministry of Forestry, Ministry of Environment and other agencies/ministries to be determined during the PPG. This coordination mechanism will cross-sectoral advice to local agencies and NGOs to be detailed during the PPG. By working with existing groups such as the Agency of Marine Affairs and Fisheries, the Southeast Asia Fishery Development Center (SEAFDEC) and linking with other relevant intergovernmental organizations such as the Mekong River Commission, the project is well positioned within the Government of Indonesia to leverage the relevant capacities at the Government level to absorb and integrate the improved understanding and knowledge into relevant policy development and implementation. Land-use plans for critical inland aquatic ecosystems, including river basins and coastal lagoon, will be developed/improved to incorporate biodiversity concerns.

Component 1 will also strengthen capacities of environmental and fisheries professionals, and other national stakeholders to address threats to inland aquatic ecosystems, including inland fisheries. A capacity building plan will be developed for sustainable management of inland aquatic resources and mechanisms for its implementation will be identified. This will lead to the training of at least 20 environment and fisheries professional from relevant ministries (i.e. Ministry of Marine Affairs and Fisheries, Ministry of Environment, Ministry of Forestry), the private sector and academia in sustainable management of inland fisheries. In addition, 15 communities and associated fishers and fish farmers will be trained in implementing ecosystem-based land-use plans that cover critical inland aquatic ecosystems. The ecosystems that will benefit from improved sector policies and where improved land-use plans will be implemented include peatlands of Kalimantan, river basins with associated lake and coastal lagoons in Sumatra and Java.

### ***Component 2. Demonstrations of conservation and sustainable use of inland aquatic biodiversity***

This component will improve the development and management of inland aquatic ecosystems in five pilot communities and enabling at least 1050 households to pursue improved livelihoods through improved fisheries production and conservation through implementation of five land-use plans developed/improved under Component 1 to incorporate threats to biodiversity. More detailed analysis and needs assessment will be conducted with stakeholders during the PPG in order to determine specific interventions at each demonstration site.

Each area represents a unique opportunity to improve the conservation and sustainable use of biodiversity in Indonesia. A number of stakeholders, including local government offices, have ongoing activities in these areas relevant to the proposed project. A detailed design of these local level interventions will be developed during the PPG phase, but possible demonstrations include:

- **Implementing aquaculture management practices** that are more sustainable and have reduced impact on local aquatic biodiversity, for example ensuring fish farming densities that will not promote fish diseases or pollute surrounding waters, implementing on-farm simple monitoring systems of temperature and water transparency to reduce waste and uneaten feed, and implementing a biosecurity system in order to prevent the spread of diseases or alien species. Culture-based fisheries will also be addressed. Improved aquaculture and culture-based fisheries (placing young indigenous fish species from aquaculture facilities into the environment for subsequent capture) practices or new sustainable practices will be developed on Pulau Pisau and other peatlands on Kalimantan, and in the peatlands of Jambi Sumatra. The development of a local integrated management system is also essential and this will be done using the tools offered through an ecosystem approach to resource management.
- **Capture fisheries activities** will consider traditional practices such as the 'beje' in Kalimantan, and other practices based on local knowledge in the two Ramsar sites (Danau Sentarum and Berbak). Improved fishery management and monitoring of stocks and catches through development of local indicators e.g. recording fish catch, mortalities and other simple environmental variables, will be developed in the peatlands, as well as the Serayu River and Pelabuhan Ratu drainages.
- **Glass eel fishery interventions** will be a specific fishery and habitat activity on the Serayu River and river mouth, and in Pelabuhan coastal areas.
- **Analysis of design and management of hydro-electric development** in the Pelabuhan Ratu and Serayu watersheds to develop cost/benefit models and designs of **fish passage structures and water discharge strategies** that incorporate biodiversity concerns into the design of dams.
- **Certification and market chain analysis** of river eel fishery on the Serayu River and Pelabuhan Ratu catchments. It is doubtful that during the short length of the project the requirements for a certification or ecolabelling scheme, e.g. the MSC certification, will be met. However pre-assessment of certification for eel fisheries will be conducted to prepare for eventual certification. The project will also develop guidelines for certification/ecolabelling Indonesia's inland fisheries based on international standards such as the FAO Guidelines for Ecolabelling Fish and Fish Products from Inland Capture Fisheries.

### ***Component 3. Monitoring and assessment of inland aquatic biodiversity***

This component will improve the capacity to assess and monitor inland aquatic biodiversity at national and local levels. Based on priorities from the National Fisheries Policy and discussions with fishery resource officers, and in conformity with Indonesia's responsibilities under the CBD and as a Member of FAO, an updated information and data collection system will be designed for inland aquatic biodiversity and especially for the components of biodiversity that are used or under threat. One component of the system will involve the mapping of important inland aquatic ecosystems such as peatlands, rivers, lakes, reservoirs and Ramsar sites. Through baseline activities such as the INDESO project, the ongoing data reporting to FAO and the management of Ramsar sites, a comprehensive information system will be established to permit the assessment and monitoring of inland aquatic biodiversity over time and space. A functional information system using earth observation of aquatic habitats combined with biological data on inland aquatic ecosystems and biodiversity will be established. Training and capacity building on how to maintain and feed the system will be employed. A learning and awareness raising component will be established to promote increased appreciation of

the role inland aquatic biodiversity plays in sustainable livelihoods and healthy ecosystems. To this end, a species identification guide for inland aquatic biodiversity will be developed. The recently approved SEAFDEC facility in Palembang will be the center for the learning component, capacity building and the information system with links to already established information systems. The Agency for Marine Affairs and Fisheries as a national organization will establish contacts with local fishers and resources managers. The SEAFDEC facility as an inter-governmental inter-regional body will provide contacts with other relevant organizations such as the Mekong River Commission and the Network of Aquaculture Centers for Asia and the Pacific.

#### ***Component 4: Project Monitoring and Evaluation and adaptation learning***

This component will ensure that Project implementation is based on adaptive and results-based management, that a Project monitoring system is put in place and that mid-term and terminal evaluations are carried out. The M&E system will collate lessons learned from the pilot sites and activities. This project will support established processes through furthering the cross-sectoral communication and outreach activities. Lessons learnt will be made widely available and shared through relevant technical and policy-level decision making debates and fora (e.g. through the Ministry of Environment, Ministry of Forestry and the Ministry of Marine Affairs and Fisheries), as well as newsletters, the established websites and other fora.

#### **4) Incremental cost reasoning and expected contributions from the baseline, the GEFTE, and co-financing**

##### ***Component 1. Mainstream inland aquatic biodiversity into resource development and management policy***

Although Indonesia has legislation relating to various aspects of biodiversity conservation there is currently insufficient national legislation on the development, management and extraction (i.e. harvest) of inland aquatic biodiversity. Policies relating to harvest of marine fishery resources have been established and widely promoted. In accordance with responsibilities to the CBD and FAO, improved policies on aquatic biodiversity will be developed. Without legal justification to stop irresponsible fishing and aquaculture practices, the overfishing and destructive practices will continue. Through the Agency for Marine Affairs and Fisheries and the multi-agency coordination mechanism on freshwater ecosystems that will be established, legislation and policies will be developed and implemented that incorporate established standards and norms for fishery management and aquaculture following an ecosystem approach to fisheries and aquaculture. A capacity assessment on formulating and implementing policies on inland aquatic biodiversity and associated ecosystems will be instigated involving relevant ministries and stakeholders. The assessment will be followed by appropriate capacity development of fisheries and environmental professionals, the private sector and academia.

The AMAF as the lead agency for wetland policy issues and will contribute \$5,233,000 to this component as in-kind contribution, including staff, office space, computers and liaison with other relevant ministries.

##### ***Component 2. Demonstrations of conservation and sustainable use of inland aquatic biodiversity***

Due to population pressure and the competing needs of users of inland aquatic ecosystems, and in light of the lack of adequate legislation on and awareness of the importance of inland aquatic biodiversity, inland fishers, fish farmers, and other users of inland ecosystems often engage in unsustainable practices. Overfishing, destructive fishing, irresponsible aquaculture, unauthorized logging, and pollution are being undertaken in part because of a lack of awareness of their impact on biodiversity. The AMAF working with local government and community groups and associations practices will demonstrate, promote and implement best management and farming practices in specific locations throughout Indonesia. Local government offices on Kalimantan, Sumatra and Java will contribute a total of \$500,000 as in-kind financing to the project.

The government of Indonesia has donated land and AMAF will staff the SEAFDEC facility in Palembang that will be the center for activities on inland fisheries and inland aquatic biodiversity. Through training courses and demonstration

facilities the SEAFDEC will contribute \$ 1.8 million of in kind financing to this component through buildings, equipment and staff.

The Agency for Assessment and Application of Technology (BPPT) will assist with technology transfer for responsible fishing and aquaculture activities in the project area and contribute \$750,000 in in-kind and cash co-financing. The Borneo Institute as a consortium of NGOs, several of whom are involved in maintaining inland aquatic biodiversity and traditional fishing activities, will provide \$200,000 in in-kind cofinancing in terms of local community development and knowledge of inland fisheries and the 'beje' fisheries. James Cook University through on-going research projects in Indonesia will contribute \$300,000 in co-financing.

### ***Component 3. Monitoring and assessment of inland aquatic biodiversity***

At present the MMAF collects statistics on production (quantity) and value from inland aquaculture and on quantity of inland fisheries. However, there is no formal assessment of the value of inland fisheries or of the value of other ecosystem services provided by inland water ecosystems. There is no comprehensive mapping of inland aquatic ecosystems that could inform development and management of inland aquatic biodiversity. Indonesia through the INDESO project and the Indonesian One Map programme are implementing a comprehensive mapping study of marine and coastal areas and of inland aquaculture for approximately \$30 million of which \$12.5 million will be contributed as co-financing through use of remote sensing and satellite imagery. BPPT will further contribute \$2,250,000 in co-financing to support the habitat mapping and information activities. FAO through its regular programme activities on species identification, data collection and capacity building will contribute \$500,000 as co-financing. The SEAFDEC facility in Palembang will be developing a comprehensive programme on inland fisheries that will include monitoring and assessment of inland aquatic biodiversity. Through staff and other infrastructure the facility will contribute \$ 0.8 million to this component. The Research Institute for Inland Fisheries will assist in the development and testing of databases, species identification guides and reporting systems for aquatic biodiversity and will contribute \$3.573 million in co-financing to this component.

### ***Component 4: M&E and adaptive learning***

The M&E component (Component 4) and the PMU will be supported in kind with FAO resources, as well as by MMAF. The MMAF and FAO are providing in-kind co-financing to component 4 through investments in staffing, office maintenance and liaison. The MMAF will be actively involved in the project review process, support, and monitoring. An annual MMAF budget contribution of 150, 000 USD (600,000 total for 4years) and an FAO contribution of 300,000 USD are counted as co-financing in this regard.

Through a three-pronged approach that combines governance reform with innovative demonstration activities and strengthened monitoring and assessment of inland aquatic biodiversity, the alternative scenario represents a major contribution to safeguarding globally significant biodiversity and improved management of ecosystems critical for inland fisheries.

## 5) Global environmental benefits (GEFTF)

Inland aquatic ecosystems	Current practices	Alternatives through project	Global Benefits
Jambi Peatlands and Berbak Ramsar site	Primarily undisturbed peatlands, with local communities dependent on harvesting resources. Unknown species and quantities are taken and no legislation or fishery management in place. Several species known to be threatened.	Habitat protection, fishery policies and fishery management plans put in place to ensure sustainable harvest of aquatic biodiversity. Increased awareness of value of biodiversity	<p>Several unique species of inland aquatic biodiversity will be conserved, including</p> <ul style="list-style-type: none"> <li>the Asian Arowana, also known as Dragon fish or bony tongue that is listed on CITES appendix 1</li> <li><i>Chitala chitala</i> or dagger fish, that is threatened and forms to basis of traditional food 'pem pek;;</li> <li><i>Paedocris</i> the world's smallest invertebrate</li> </ul> <p>Globally significant habitats including tropical peatlands, tropical rain forests, and coastal lagoons will be rehabilitated and sustainably managed. As a result, the terrestrial species that depend on these ecosystems, including threatened bird, reptile and mammal species will also be protected.</p>
Denau Sentarun Ramsar site	National park and Ramsar site similar to above	As above	Globally significant habitats including, seasonal lakes, tropical and rain forests will be rehabilitated and sustainably managed. Important migratory fishes, waterfowl and other terrestrial species, including several endangered species will be protected.
Kalimantan peatlands	Improper land use and lack of fishery or aquaculture management plans. Continued degradation of wetlands through unsustainable fishing and land use practices	Land use plans established. Habitat rehabilitation to support fisheries and fish farming, including stocking of farmed fish into peatlands. Recognition of traditional fishing practices.	<p>Several unique species of inland aquatic biodiversity will be conserved, including</p> <ul style="list-style-type: none"> <li>the Asian Arowana, also known as Dragon fish or bony tongue that is listed on CITES appendix 1</li> <li><i>Chitala chitala</i> or dagger fish, that is threatened and forms to basis of traditional food 'pem pek;;</li> <li><i>Paedocris</i> the world's smallest invertebrate</li> </ul> <p>Unique peatland habitat will be restored</p>
Java sites Chilacap and Pelabuhan Ratu	Habitat degradation as well as unregulated and unreported fishing for eels is reducing eel population.	Habitat rehabilitation and improved fishery management policies combined with monitoring and community awareness improves population of eels and associated biodiversity.	Tropical rainforests and associated biodiversity will be rehabilitated and conserved, with specific improvement in the management and conservation of Indonesian eel populations that are being over-harvested for local and external markets.

**A.2 Stakeholders.** Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and other as relevant) and describe how they will be engaged in project preparation.

The following stakeholders have been identified as key actors in the Project and will be further consulted during preparation of the full project.

Key stakeholders	Engagement during project preparation	Roles during project implementation
Ministry of Marine Affairs and Fisheries (MMAF)	Lead agency; support full PPG process	Executing agency House project team Facilitate policy integration through sector representation at national level Link to existing/ongoing activities such as fisheries and aquaculture activities, SEAFDEC facility development and staffing, and links to other Ministries, e.g. Environment and Forestry. Capacity enhancement through international collaborations (e.g. Mekong River) Baseline support at pilot sites
Ministry of the Environment	Provide policy and technical inputs especially on protected areas, mapping and land use.	Provide input to policy review and coordination with other ministries on environmental and conservation issues, especially in and around Ramsar sites and other protected areas. Capacity support through project (e.g. financing of hard ware, modelling support) Partner in local level awareness raising.
Fishing and aquaculture communities in pilot areas	Active stakeholder and participants during PPG phase	Provide national CC coordination hub; facilitate sector contribution into national planning framework Support mainstreaming of CC fisheries sector needs into national planning and budgeting processes Provide/ broker relevant capacity support Find national and international funding support for proposal coming from component 3
SEAFDEC facility Palembang	Active stakeholder and participants during PPG phase	Provide technical and political leadership and support esp. in role of information system and training. Focal Point for inland fishery resources activities. Stakeholder of capacity building plan
Other line ministries	Active stakeholder and participants during PPG phase	Adaptation learning Joint implementation of activities as appropriate An application of an Ecosystem Approach requires multi-stakeholder and -sector engagement
Danau Sentarum National Park Authority	Active stakeholder and participants during PPG phase; possibly support expertise	Provide technical inputs Potentially joint project execution of specific activities Capacity development support
NGOs, CBOs		Potentially pilot activity engagement Specific expertise e.g. on gender Mobilization of local communities if appropriate Project implementation support Adaptation learning
Private sector	Fishing and aquaculture and timber industry; Aquafarm tilapia farm	Potentially pilot activity engagement Adaptation learning Climate risk proofing business Engagement on CC resilient sector policies
James Cook University; local universities	Active stakeholder and participants during PPG phase; possibly support expertise	Technical support inputs



### ***Gender and indigenous people***

The project recognizes that women are vital stakeholders in managing and using aquatic biodiversity, through their involvement in harvesting, processing trading, selling and distributing inland fishery resources. The project includes areas that contain indigenous people and people that have traditional rights to inland aquatic habitats and their biodiversity. The project will ensure that these stakeholders are afforded fair and equitable treatment and that their rights and customs are not infringed. The project will engage these groups to promote improved management and conservation of inland aquatic biodiversity.

### **6) Innovativeness, Sustainability and potential for Scaling up**

The approach of designing a fisheries and aquaculture focused project intervention as a contribution to the overall goal of conserving biodiversity is innovative. The project will be designed as an example of cross-sectoral and multi-disciplinary approach to conservation and sustainable use of inland aquatic biodiversity, clearly strengthening capacities of Indonesia for sustainable management of its inland fisheries and aquaculture. The establishment of a multi-agency coordination mechanism on fresh water ecosystem management in innovative and will help ensure sustainability. Moreover, the demonstration component of the Project that will develop validated management practices for conservation and sustainable use of inland aquatic biodiversity have great potential for scaling up the 3,000 square kilometers covered by the land use plans. The market chain analysis and guidelines and pre-assessments for ecolabelling/certification will in the long-term promote improved access to markets as well as conservation of inland aquatic biodiversity. The involvement of private industry, and the demonstration that sustainable fishing and fish farming can be profitable, improve market access and promote livelihoods, will further promote up-scaling and sustainability of the project.

**A.3 Risks.** Indicate risks, including climate change risks, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (Table format acceptable).

<b>Risk</b>	<b>Level of risk</b>	<b>Mitigation strategy</b>
Insufficient fisheries sector stakeholder capacities to absorb action needs	L	The support for this project in itself is an awareness raising and capacity support initiative. Careful planning of implementation arrangements and project activities will address this risk.
Limited capacity in MMAF to implement project	L	MMAF has extremely high capacity as do other line agencies and partners. A dedicated project technical support mechanism will be designed to ensure effective project execution and coordination.
Lack of political will and financial sustainability	L	Awareness raising and engagement of key stakeholders is planned along with economic justification for interventions.
Low pilot level capacities	M	Dedicated local level support is planned and must be further designed in a participatory manner during the PPG to ensure a feasible design for pilot activities.
Stakeholder resistance	M	Awareness raising, training and engagement of key stakeholders is planned along with economic justification for interventions that will improve livelihoods.
Climate change	L	The impacts of climate change are not foreseen to be severe on inland environments during the course of the project. Improving and rehabilitating inland aquatic habitats in the longer term will buffer communities against some of the impacts of climate change and provide communities with a food resource in the face of extreme climatic events.

### **A.4 Coordination.** Outline the coordination with other relevant GEF financed and other initiatives.

Coordination of other related GEF projects in particular is foreseen. Projects currently under implementation or in the preparation pipeline will be reviewed during the PPG phase. Key initiatives that the project will coordinate with include:

UNORCID: Established as a central coordinating facility between the UN System and the Republic of Indonesia UNORCID outlines the framework for the establishment of a UN Office for REDD+ Coordination in Indonesia. REDD+ activities in Indonesia are currently focused on land use, peatlands and forest as means to reduced carbon emissions by using native biodiversity and traditional farming, forestry and fishing practices. A partnership with the Government of Norway was established in which Norway pledged 1 billion USD in support of REDD+ activities. The project will coordinate with REDD+ and UNORCID to help safeguard aquatic ecosystems.

The FAO Pipeline project: Strengthening the Capacity of Water User. Associations (WUAs) in Indonesia

Objectives : The specific objectives are : (1) To establish institutional networking and selfhelp of the WUAs; 2) To improve technical capacity and economic conditions of WUA members; 3) To improve management capacity of WUAs managers in order to be able to participate in the process of policy making either at field level or institutional level.

The FAO Pipeline Project: Land Rehabilitation through Sustainable cropland and forest management in the Dieng Plateau of Central Java, Indonesia. Objectives: The project objective is to strengthen the abilities of local communities and governments to adapt to and mitigate climate change and rehabilitate the Dieng agro-ecosystem by adopting climate smart agriculture and sustainable forest management policies and practices.

Millennium Challenge Corporation (MCC), is the U.S. Government's innovative foreign assistance program to reduce poverty through economic growth. The USA has made \$600 million available to Indonesia for responsible economic development. Projects are being planned on aquaculture development, however not in the project areas at present. The proposed GEF project will link with MCC to ensure coordination of activities if they arise in the project area, and to promote conservation and sustainable use in MCC's poverty alleviation activities.

The Ministry of Forestry and the Ministry of Environment are responsible for managing the system of national parks and the Ramsar sites. The project will liaise with these ministries during the PPG phase to coordinate design and implementation of activities.

Several NGOs and CSOs have been identified with relevant activities in the project area, e.g the Borneo Institute, Walhi Kalteng, Save our Borneo, Yayasan Betang Borneo, Sarekat Hijau, the Indonesian Conservation Community and Lembaga Germawan. The project will liaise with these groups during the PPG and coordinate activities as appropriate.

The GEF/IFAD Project: Sustainable Management of Peatland Ecosystems in Indonesia (2014-2018) has the objective to scale up sustainable management of peatlands in targeted regions of Indonesia through strengthened capacity, multi-stakeholder partnerships, and fire prevention and sustainable use in targetted peatlands. The expected outcomes include enhanced capacity and institutional framework for implementation of National Peatland Regulations, Action Plans and other regional agreements, as well as improved fire prevention on and sustainable management of peatlands. This PIF does not specifically address fishery issues, but collaboration will be sought under Component 1 on revising and mainstreaming policies on cross-sectoral management of peatlands.

The GEF/UNDP Project: Strengthening Community Based Forest and Watershed Management (SCBFWM) project. The objective of the project is to support efforts on reducing forest and land degradation in order to restore watershed functions and ecosystem services. The expected outcomes of the project include the improved management of six critical watersheds covering approx. 500,000 ha with diverse ecological and socio-economic conditions using CBFWM, and mainstreaming of CBFWM into government development plans. Collaboration will be sought under Component 1 of the proposed project on issues related to land-use planning and mainstreaming.

Recently approved GEF projects that the project will coordinate with during the PPG phase to identify possible areas of collaboration and synergies include:

- National Biodiversity Planning to Support the Implementation of the CBD 2011-2020 Strategic Plan;
- Sustainable Forest and Biodiversity Management in Borneo;
- Transforming Effectiveness of Biodiversity Conservation in Priority Sumatran Landscapes.

- Strengthening Forest and Ecosystem Connectivity in RIMBA Landscape of Central Sumatra through Investing in Natural Capital, Biodiversity Conservation, and Land-Based Emissions Reductions.

## **B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

### **B.1 National strategies and plans or reports and assessments under the relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, Biennial Update Reports, etc.**

The proposed project is consistent with many instruments of the Convention on Biological Diversity (CBD). Indonesia ratified the CBD in 1994 and developed an revised Indonesia Biodiversity Strategic Action Plan (IBSAP) in 2003. The IBSAP calls for implementing the articles of the CBD and the sustainable use of biodiversity is incorporated into the Long-term Planning Development programme. The five goals of the IBSAP focus on conservation and sustainable use of biodiversity for the welfare of local communities, using scientific information and local knowledge, with improved institutional capacity and enforcement and with conflict resolution ([www.bappenas.go.id](http://www.bappenas.go.id)). The fourth National Report to the Convention on Biological Diversity highlighted inland water biodiversity as 'substantially embedded into the program of biodiversity inventory and management covering various ecosystem types'.

The objectives of the project are consistent with all of the goals of the CBD Aichi Biodiversity Targets:

- Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
- Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use
- Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
- Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services
- Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

The project will contribute towards the achievement of a number of specific Targets, especially Targets 1, 2, 6, 7, 12, 14, 18 and 19.

Indonesia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994 and the convention came into force that same year. The project promotes the use natural ecosystems including riparian forests and peatlands, as a means to conserve and use biodiversity. Although carbon sequestration is not an objective of the proposal, use of natural ecosystems as a means of food production and employment will reduce the need to drain peatlands and degrade forest habitat.

The Convention on Wetlands (Ramsar) came into force for Indonesia on 8 August 1992. Indonesia presently has 6 sites designated as Wetlands of International Importance, with a surface area of 964,690 hectares. The project will work in two Ramsar sites and support the government's obligation to conservation and sustainably use biodiversity.

Indonesia has developed a National Medium-Term Priority Framework (NMTPF) 2003-2020 that guides FAO project priorities and development in the country. The proposed project is in line with Core Strategy Priority 2 'Developing Sustainable Agriculture in Climate-Changing Environment Using "Green" Technology & Best Practices'.

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

In working towards its overall objectives, the project will contribute to Biodiversity Strategic Objective 2: "Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes, and sectors", specifically Outcome 2.2: "Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks". The project will catalyse the development and adoption of effective and coherent regulatory measures and the institutional frameworks needed for conservation and sustainable use of freshwater ecosystems in Indonesia, through enhanced land use planning and support to future certification of inland fisheries accompanied by improved monitoring and assessment of inland aquatic biodiversity. The project will also foster the establishment of best practices in the management of inland aquatic ecosystems that will generate both global environmental benefits as well as socio-economic benefits for local communities.

### **B.3 The GEF Agency's comparative advantage for implementing the project**

FAO, with 191 member countries, is the United Nations agency with competency in all areas of fisheries and aquaculture. FAO has led global work on implementing the FAO Code of Conduct for Responsible Fisheries, an ecosystem approach to fisheries and aquaculture, and has produced codes of practices and standards related to inland fishery management, genetic resource management, product safety and responsible trade, including guidelines for the ecolabelling of fish and fishery products. Information systems and databases on fishery and aquaculture production, geographic information systems, and mapping of inland water bodies are maintained by FAO. The FAO 'Fish Finder' programme is the recognized expert in fish taxonomy and fish species identification materials. The Organization also houses the Commission on Genetic Resources for Food and Agriculture that is developing a State of the World Aquatic Genetic Resources for Food and Agriculture and a State of the World Biodiversity for Food and Agriculture. The Organization has excellent relations and technical collaboration with numerous groups in the region, including the WorldFish Center, the Network of Aquaculture Centres in Asia and the Pacific, the International Water Management Institute, and the South East Asia Fisheries Development Center.


With respect to staff capacity, FAO has Representation in Indonesia with a small administrative staff. FAO Indonesia is supported both technically and administratively by the Regional Office for Asia and the Pacific in Bangkok, the Sub-Regional Office for the South Pacific and by FAO Headquarters in Rome. There are technical specialists in these offices with solid knowledge of fisheries, aquaculture and biodiversity in Indonesia. As for all projects, a multidisciplinary Project Task Force will be set up and draw on the range of technical expertise available throughout FAO to support the project, including from the regional and sub-regional fisheries officers, operational and other technical staff as required, as well as from the Fisheries and Aquaculture Department and other technical units, as necessary.

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

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the Operational Focal Points endorsement letter(s) with this template. For SGP, use this OFF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Mr Dana A. Kartakusuma	Assistant Minister, Global Environment (GEF OFF)	Ministry of Enviroment	03/05/2014

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

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date (MM/DD/YYYY)	Project Contact Person	Telephone	Email Address
Gustavo Merino Director Investment Centre Division Technical Cooperation Department FAO Viale delle Terme di Caracalla (00153) Rome, Italy <a href="mailto:TCI-Director@fao.org">TCI-Director@fao.org</a>		March 21, 2014	Devin Bartley Senior Fisheries Resources Officer	+390657054 376	Devin.Bartley@fao.org
Barbara Cooney FAO GEF Coordinator Email: <a href="mailto:Barbara.Cooney@fao.org">Barbara.Cooney@fao.org</a> Tel: +3906 5705 5478					