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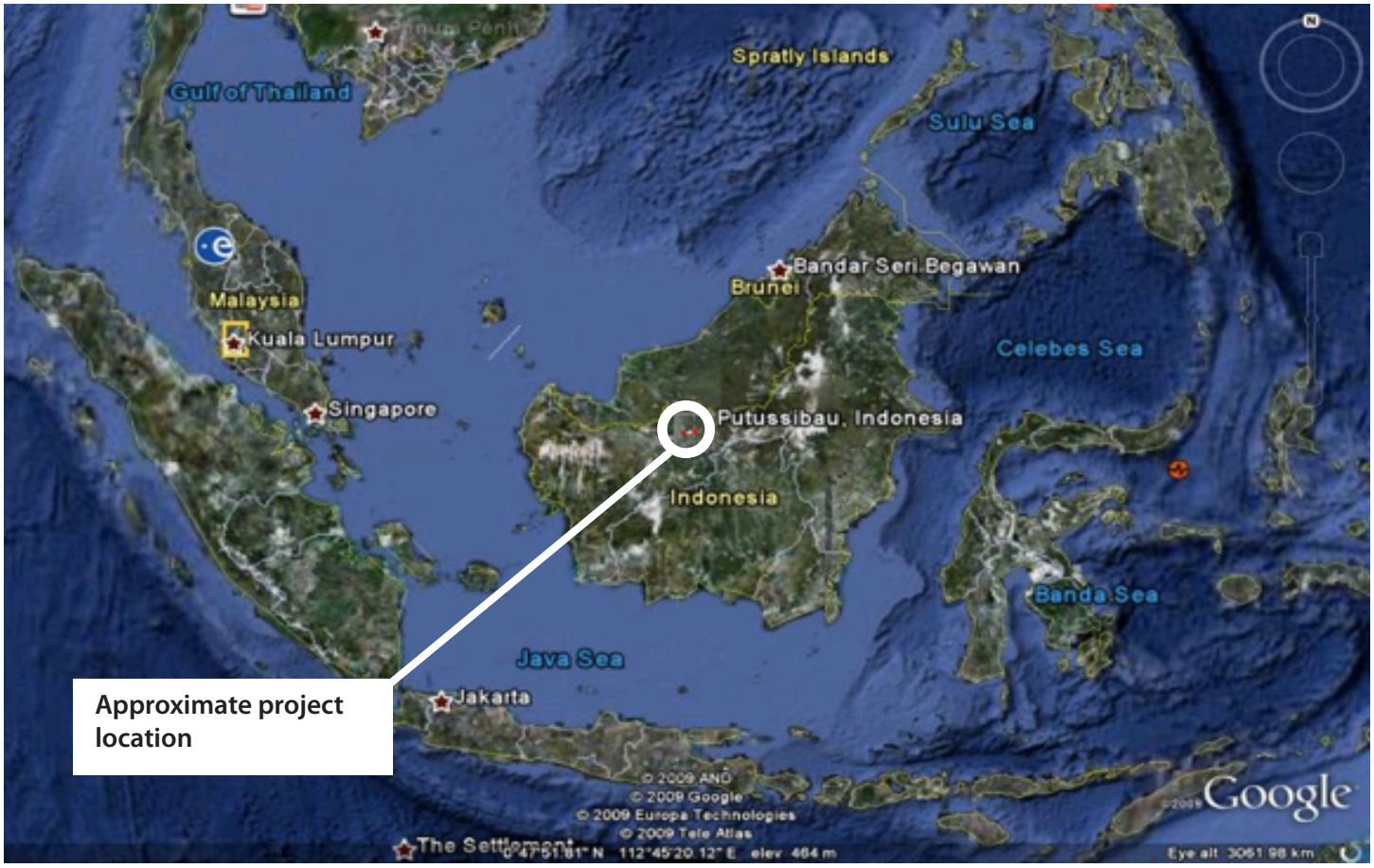
▲ Overlooking the Danau Sentarum National Park and Surrounding Lakes Ecosystem, including the Danau Siawan wetland and peatland

DANAU SIAWAN BELIDA REDD+ PROJECT KALIMANTAN, INDONESIA



▲ Figure 1 – Proposed project location, Kapuas Hulu District, Indonesia

The Siawan Belida Peat Swamp Forest (the Project Area)

The project site is located in the Kapuas Hulu District, West Kalimantan Province, Indonesia (Figure 1). The closest major population centre is Putussibau approximately 25 kilometres northeast of the project boundary.

The proposed 46,000 hectare (ha) project site (Danau Siawan wetland and peat swamp forest) adjoins the iconic RAMSAR listed wetland ecosystem, the Danau Sentarum National Park. This complex ecosystem comprises a myriad of swamp and peat forests surrounded by seasonally flooded lakes. Together, the peatlands, lakes and swamps form the upper basin of Indonesia's longest river, the Kapuas. The lakes ecosystem performs critical ecosystem services in regulating water flow to the Kapuas River, which is the lifeblood of many of the 3.7 million people living in West Kalimantan Province, who rely on the river for fishing, transport and bathing. At least 30 villages and sub-villages rely on the river and lakes system for a large proportion of their diet, as well as a source of income through sale of fish for consumption or for ornamental purposes.

The project area is under significant threat of conversion to oil palm plantation. Oil palm licences have been granted for the areas bordering the project site to the north, south and west. Project activities involve working with all levels of Government (National, Provincial, District, sub-District) to remove this threat. This has included: 1) targeted activities to reduce short term threats by supporting and influencing Government five-yearly spatial planning processes; and 2) efforts to reduce long term threats by obtaining an Ecosystem Restoration Concession (ERC) license for the site which will enable restoration and sustainable management of the project area.

Biophysical and socio-economic profile of the proposed project site

Estimated area of project site	46,000 ha
Legal status	Conversion forest (*Hutan Produksi Konversi*, HPK), 39,000 ha; and Protected Area (*Hutan Lindung*), 6,500 ha. To date oil palm licences have not been granted on the site, however there is evidence that an oil palm licence would have already been approved for the site, were it not due to the project and the request to set-aside the site for REDD
Main forest type(s)	Tropical peat swamp forest, riverine forest, kerangas (Giesen, 2000).
Predominant soil type	Peat soil with over illite and kaolin clays, with smaller areas of sandy podzols.
Degradation status	Previously selectively logged by commercial forestry companies and local villagers, with partial regeneration of commercial forest species
Future deforestation / degradation threats	Conversion to oil palm plantation, illegal logging
Villages within close proximity to project	10

Biodiversity

The lake, swamp and peatland ecosystem surrounding the Danau Siawan forest is home to some of the last remaining orang-utan populations in Indonesia, as well as Borneo's largest inland populations of Proboscis Monkey. Between 300 and 500 fish species have been recorded here, many of which are vulnerable to extinction. More than 500 plant species have been documented in the area, of which up to 43 are not found anywhere else in the world. Vast numbers of bird, mammal, reptilian and amphibian species have also been recorded here. A series of surveys conducted by FFI detail the current biodiversity conditions in the project zone.

Vegetation surveys undertaken in the project zone between 2008 and 2009 established 31 sample plots. A total of 166 species of 45 families were identified. Dipterocarpaceae with its 30 species was the most commonly found in the proposed project area, and Anacardiaceae with its 11 species was also commonly found. The remaining 43 families were scarce. Amongst the species identified, 15 were categorized as having High Conservation Values (HCV), of which 6 species are listed as Critical, 4 species as Endangered, and 3 species as Vulnerable.

Systematic faunal surveys have also been conducted. These surveys focused on recording data for mammals (and bats), birds, herpetofauna (including the false gavial), and fishes. Of the 19 species of mammals found, 15 are categorized as HCV species, either listed in the IUCN Redlist, CITES Appendix II, protected by Indonesian Law (Governmental Regulation – GR No 7 1999), endemic species to Borneo, or a combination of these criteria. There are 12 species of bat (from four families). One of the species identified (Murina aenea) was a new recording for West Kalimantan. 168 species of birds were found in the area – 74 warranting HCV status. A total of 57 fish species were identified from the fresh water areas, where Cyprinidae was the family with the most abundant species present. Of all fish species, 26 were important food sources for local people.

Malaysian Blue Flycatcher (Cyornis turcosa) male (left, blue throat) and female (right, pale orange throat); this near-threatened flycatcher is a specialist of riverine habitat. These birds were caught manually from their night roost by an FFI field assistant.

Communities

Communities in the project area are highly dependent on natural resources. Fishing, rubber plantations, honey and hunting are the primary livelihoods, although diversification of a household's economic portfolio is an important strategy for reducing the inherent risks of relying on the natural resource base. Secondary economic activities such as collection of non-timber forest products is important during the rainy season when fish catches are low, gardens are flooded, and rubber cannot be tapped due to high water levels.

The project is designed to be implemented through collaborative management with the 8 villages and 2 customary groups (Malay and Dayak) in the project area. We have started working with village and customary institutions to identify their aspirations and capacity needs. We will support village and customary institutions to strengthen and build new institutional forms and practices that combine the advantages of customary governance with the principles of good governance, equity and environmental sustainability. Community members will be trained in the entire spectrum of activities from planning and budgeting to biodiversity, community and carbon monitoring.

Community objectives and sub-objectives of the project

Community objectives are depicted in Figure 1 with reference to the main asset classes of the sustainable livelihoods framework which is employed as a lens to approach community wellbeing. Community activities of the project, developed in line with these objectives, include:

- Socio-Cultural-Economic assessments to gaining an in-depth understanding of communities in the project zone through a participatory approach
- Building an enabling environment for collaborative management of the project zone with communities
- Awareness raising and involvement in project design
- Analysis of appropriate institutional structures for communities to receive a share of revenues generated from project activities
- Expanding economic opportunities of communities within the project zone, including analysis and support to communities
- Social impact monitoring