

**PROJECT INFORMATION DOCUMENT (PID)  
IDENTIFICATION/CONCEPT STAGE**

Report No.: PIDC103763

<b>Project Name</b>	Peatland Environment Accelerated Transformation Project
<b>Region</b>	EAST ASIA AND PACIFIC
<b>Country</b>	Indonesia
<b>Financing Instrument</b>	IPF
<b>Project ID</b>	P162960
<b>Borrower Name</b>	Peatland Restoration Agency (BRG: Badan Restorasi Gambut)
<b>Implementing Agency</b>	Peatland Restoration Agency (BRG: Badan Restorasi Gambut)
<b>Environmental Category</b>	A - Full Assessment
<b>Date PID Prepared</b>	17-May-2017
<b>Estimated Date of Approval</b>	01-Jun-2017
<b>Initiation Note Review Decision</b>	The review did authorize the preparation to continue

## **I. Introduction and Context**

### **Country Context**

Indonesia is the fourth most populous country in the world and the tenth largest economy in terms of purchasing power parity. Over the past decade, Indonesia's rapid development has successfully lifted millions of people out of poverty and impressively improved social indicators. However, 12% of the population still lives below the official poverty line (27 million) and another 14% of the population are highly vulnerable to slipping back into poverty (38 million). Forest-dependent and rural communities have the highest rates of poverty and vulnerability, accounting for one-fifth of Indonesia's poor (6.3 million) with a poverty rate almost double the national average (20%). Strong geographic disparities also exist in poverty incidences, with Eastern Indonesia (especially Papua) having poverty rates around 30%. Lessons from other countries highlight the challenges in reducing poverty rates into single digits, specifically pointing to the need for differentiated strategies to target those populations.

The structure of the Indonesian economy has historically been driven by the agricultural sector. While this dominance has declined over recent decades, from 24% in 1980 to 14% today, it is still an important contributor to employment, particularly in rural areas accounting for 38% of the population. Despite agriculture's shrinking prominence in the overall national economy, the growth of agricultural commodities (particularly oil palm) have had major impacts in rural areas. From 2002 to 2012, production of unprocessed palm oil grew from approximately 10 million tons to 30 million tons. The labor-intensive nature of plantations has provided the rural poor access to employment opportunities and about 40% of the plantations are owned by small-holders themselves. Although there are many serious conflicts and exploitative behaviors surrounding some oil palm plantations, it has been estimated to directly provide 3.2 million jobs, is an important source of government revenues from export earnings, and aides in developing the nation's rural infrastructure. As a result, the Indonesia government has been explicit in aiming to double oil palm production by 2020 (from 2010 production

levels).

Continued environmental degradation has the potential to undermine Indonesia's long-term sustainable growth. Indonesia is endowed with the third largest tropical forest area in the world, with an estimated 94 million hectares of natural and planted forests. In addition to being a valuable national asset, Indonesia's forests are of global significance due to their rich biodiversity and potential contribution in mitigating climate change. However economic and population growth have resulted in a subsequent increased pressure on land and natural resources for agricultural production and urban expansion, resulting in some of the highest rates of deforestation globally and high levels of biodiversity at risk of extinction. Due largely to deforestation, forest degradation and peat decomposition, Indonesia is estimated to be one of the five largest greenhouse gas emitters in the world. In response, the Government of Indonesian is emerging as a global leader in mitigation efforts, making ambitious commitments to curb greenhouse gas emissions by 29% with domestic resources and 41% with international assistance against the projected 2030 baseline, with forests and peatlands one of six key sectors to achieving the set targets.

### **Sectoral and Institutional Context**

Indonesia's peatlands are estimated at between 14–20 million hectares (140,000 to over 200,000 km<sup>2</sup>) and concentrated in the coastal lowland areas of Sumatra, Kalimantan, and Papua. These lowlands constitute an area of about 36 million hectares (or approximately 20% of Indonesia's total land area) with approximately 30 million hectares of this area comprised of coastal and near-coastal swamp. Historically all Indonesian lowland areas were forested and are almost continually saturated with water under natural conditions. This saturation does not allow for typical decomposition of organic plant material resulting in the formation of extensive areas of peat. Roughly half of these lowland areas are comprised of peatlands but they also include coastal swamps with mineral soils that are often, but not always, tidally influenced. Peatlands themselves are generally defined as having a naturally accumulated peat layer at the surface and distinguished from typical mineral soils by having a higher proportion of recognizable plant material that has failed to decompose due to a deficit in oxygen from waterlogged conditions. As a result, these peatlands act as one of the most important terrestrial reservoirs of soil carbon in the world. Despite only covering 3% of the world's land area, peatlands are estimated to store approximately 10% of freshwater and 30% of the soil carbon due to the accumulation of thousands of years of preserved plant material.

Lowlands are important for the development of the economy of Indonesia. With most of the suitable upland areas having already been developed, lowlands have the potential for meeting some of Government's highest priority development objectives, including: (i) reduction of poverty by the generation of employment through investments in agro- and forestry based industries; (ii) generation of hard currency by stimulating export of agricultural and forestry products; (iii) achievement of food security by increasing productivity of existing lowland schemes and development of new agricultural areas to compensate for population growth and loss of production area on Java; (iv) reduction of haze air pollution from land and forest fires; and, (v) contributing strongly to the achievement of international climate change commitments. Roughly 3.7 million hectares of lowlands were partially settled and developed during the Government's transmigration program between the 1970s and 1990s. Since the 1990s lowland areas have experienced rapid expansion of industrial plantations (wood fiber and oil palm) and smallholder development (mosaic of settlements, agricultural fields and plantations) often at the expense of primary forest and peatlands. From 1990 to 2015, peat swamp forest in Sumatra declined from roughly 5.5 million hectares (70% forest cover) to around 1.5 million hectares (20% forest cover). Similar patterns have been observed in Kalimantan, with almost 5 million hectares (80% forest cover) of peat swamp forest reduced to 2.5 million hectares (40% forest cover) by 2015. This trend of rapid deforestation continues with peatland deforestation rates increasing over the past

decade in some provinces (e.g., Riau, West Kalimantan).

Management of surface and ground water is an essential element for both productive use and conservation of lowland areas, especially in peatlands. The high permeability of peatlands causes changes in the hydrology to have impacts over a very large area with the drainage of peatlands for agricultural or other development having at least three important consequences with major social and economic effects. First, when drained, the peat oxidizes and carbon is continuously released into the atmosphere as CO<sub>2</sub>, contributing to climate change. Second, drained peatlands are extremely fire prone with the 2015 forest fires estimated to have cost Indonesia \$16.1 billion, or about 1.9% of national GDP. Despite only constituting around 10% of Indonesia's land area, approximately 50% of fires from June to October 2015 were located in peatlands. The majority of fires in peatland (roughly 60%) occur in areas that have been deforested, but not (yet) developed as plantations, with an estimated 25% of peatland fires occurring on existing wood fiber or oil palm plantations. Peatland drying and burning has greenhouse gas emissions that are significant on the global scale. Lastly, the loss of peat due to oxidation results in subsidence of the peatland eventually leading to frequent or even permanent flooding. Conservative estimates indicate that average subsidence rates can be approximately 1.5 m over the first five years and 5 cm/year over the subsequent decades, with significant impacts on both the frequency and extent of flooding and the productivity of plantations on peatlands. It is estimated that 95% of all peatlands outside of Papua have been degraded to some degree, with degradation most advanced in Sumatra and an increasing risk of severe degradation in Kalimantan.

Business as usual is not a sustainable strategy for Indonesia's economic aspirations and development of the lowlands. Recognising this, the Government has embarked upon a process to fully harness the country's significant natural resources and power a more just and inclusive economy that is resilient to a changing climate. This vision for future development is intended to capitalize on global carbon markets, respond to the consumer preferences and pressures of a more informed and aware population, and reduce the impact of fires. Lowland development is currently governed by policies and regulations divided by thematic sectors and/or political boundaries, which are often incomplete, overlapping and conflicting. The success of future endeavors depends on a broader approach positioned within a landscape context that can account for externalities associated with sectoral developments. Success of such an approach depends on improved horizontal coordination among different agencies in the public and private spheres as well as deeper vertical integration among national, sub-national and local actors. Such an approach to rural land, forest and water management, that is holistic and recognizes the interconnections between these resources, has the potential to support inclusive and sustainable growth with fewer environmental and social externalities.

The Government of Indonesia has committed to address the sustainable development, restoration and conservation of lowland areas. This renewed effort began in September 2015 with the MoEF establishing an ad hoc Task Force to lead the national emergency response to fire and haze reduction. At the Paris COP21, in November 2015, the President committed to: creating a Peatland Restoration Agency (BRG: Badan Restorasi Gambut), that was formally established on January 06, 2016, through Presidential Decree (No.1/2016), and establishing a moratorium on peatland development along with a license review mechanism. Recent policy developments reconfirm the Government's commitment and explicitly acknowledge the links between peatland development and the incidence of fire and haze. In December 2016, Presidential Regulation #71/2016 established a moratorium to all new concessions on peatlands and prohibited any clearance on previously issued concessions on peatlands. While new forestry concessions have been suspended since the 2011 Forestry Moratorium, these new provisions extend those concessions to estate crops (oil palm, rubber, coffee) and include measures to prevent further clearance and drainage of peatlands within existing forestry/estate crop licenses.

Through establishment of the Peatland Restoration Agency the Government has committed to the restoration of at least 2 million hectares of peatland. This is to be achieved through: (i) mapping peatland landscapes (hydrological units); (ii) land use zoning, including the designation of protection and development zones; (iii) restructuring the management of burnt areas; and, (iv) socialization and education. The efforts to restore peatlands and restructure the zoning and management of peatlands are intended to lay the foundations for reducing the risk of future haze from fires on peatlands and to contribute to a new economic trajectory focused on the sustainable development, restoration and conservation of lowland areas. For this to be successful it requires a strong platform to crowd in and ensure coordination among the myriad complementary actions from other government agencies, non-governmental organizations, communities, the private sector and development partners to create new economic opportunities within the lowlands and address the underlying drivers of fires and haze.

### **Relationship to CAS/CPS/CPF**

This proposed operation supports World Bank Group programs across a number of practices and is aligned with the SCD, the Country Partnership Framework (CPF), and the World Bank Group twin goals. Recognizing the importance of sustainable natural resource management to eliminating extreme poverty and boosting shared prosperity, Sustainable Landscape Management is one of six core CPF pillars (2016-2018). This proposed project provides preparatory financing for the potential operationalization of the landscape management framework at a specific, high-priority region. It builds upon existing and pipeline World Bank operations and dialogue in the water, agricultural, social, land, and environmental sectors in an effort to better integrate those activities for a greater overall impact.

## **II. Project Development Objective(s)**

### **Proposed Development Objective(s)**

This is the first in a Series of Projects aimed at supporting the Government's efforts toward the restoration and management of at least two million hectares of peatland and promoting a framework for the sustainable development, restoration and conservation of lowland areas in Indonesia.

The Program Development Objective is to improve the integration and coordination among multi-sector stakeholders to promote the sustainable development, restoration and conservation of targeted lowland areas in Indonesia. This is a common objective for all projects within the Lowlands Program. This will be achieved through:

- i. Integrated multi-sectoral planning for lowland development, restoration and conservation;
- ii. Improved policy instruments for lowland development, restoration and conservation; and,
- iii. Multi-sectoral coordination mechanisms for development, restoration and conservation of lowland areas.

The Project Development Objective is to improve the capacity to plan, coordinate, and monitor the restoration, conservation and development of selected peatlands in Indonesia.

### **Key Results**

- i. Completion of investment and financing plan for peatland restoration;
- ii. Technical and regulatory guidelines developed (number);
- iii. Mapping inventory and database completed and accessible; and,
- iv. Financing mobilized for peatland restoration, conservation and development (US\$).

## **III. Preliminary Description**

### **Concept Description**

**IV. Safeguard Policies that Might Apply**

<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04	X		
Forests OP/BP 4.36	X		
Pest Management OP 4.09			X
Physical Cultural Resources OP/BP 4.11			X
Indigenous Peoples OP/BP 4.10	X		
Involuntary Resettlement OP/BP 4.12	X		
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50		X	
Projects in Disputed Areas OP/BP 7.60		X	

**V. Financing (in USD Million)**

Total Project Cost:	4.5	Total Bank Financing:	0
Financing Gap:	0		
<b>Financing Source</b>			<b>Amount</b>
Sustainable Landscapes MDTF			4.5

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