

FOREST CARBON



Peatland ecosystem restoration in Indonesia

The Sumatra Merang Peatland Project is restoring more than 22,900 hectares of peatland rainforest in the Merang region of Indonesia. Protecting an area more than 3.5 times the size of Manhattan, the project targets the Merang biodiversity corridor, one of the largest and deepest peat swamps in South Sumatra. Climate finance rehabilitates and protects this threatened ecosystem, reducing emissions, and creating a conservation area for hundreds of unique and endangered species. The project works with local communities from nearby villages to improve livelihoods which reduces pressure on the forest.



Project area and its threats

Sumatra Merang is in the Musi Banyuasin District in South Sumatra, Indonesia. This district is one of only two in Indonesia selected to showcase a landscape approach to conservation and sustainable commodities through a pilot initiative led by TFA2020 and South Sumatra's regional government. Private sector engagement is a priority, as companies source palm oil and paper pulp from plantations surrounding the project site. In the late 1990's, as mineral soil areas in South Sumatra became fully occupied, developers started to turn to peatlands and have been gradually securing land rights for several large concessions in the Merang corridor.

The project is a 22,934-hectare concession of degraded peatland forest that has an ecosystem restoration license from the Indonesian government. It is one of the last remaining peatland zones that have been preserved from conversion in the South Sumatra region. Through peatland restoration, logging prevention and biodiversity preservation the project directly contributes to climate mitigation, conservation goals and biodiversity objectives.

The work of the project team within the supply shed of nearby companies also showcases how environmental services projects can join forces with commodity producers on the ground to assist in sustainable supply chain transformation and the empowerment of local communities.

Climate change mitigation

The threatened peatland of the project is at high risk for conversion to commodities production. Climate finance works to prevent conversion by protecting the area and working with local communities to support sustainable livelihoods.

Measurable impacts

Here are the impacts of the Sumatra Merang Peatland Project, forecast through 2025.



CLIMATE:

3.4 million tonnes of CO₂ emissions reduced by 2021



ECOSYSTEMS:

22,934 hectares of peatland forest restored and protected



SPECIES:

Restoring habitat for unique and endangered species such as the Sumatran tiger, rhinoceros hornbill and sun bear



LIVELIHOODS:

Development initiatives prepared alongside local communities

145 jobs created or supported in areas such as dam construction, forest patrols and more



INCLUSIVITY:

25% of jobs created will be held by women



SUSTAINABLE ENTERPRISE:

Support for local enterprises in villages near to the project such as developing sustainable fishing production



FAIR ECONOMIC RETURN:

Over \$500,000 invested in local communities.

Peatlands have a high carbon stock and are very important carbon sinks. Rehabilitating the area will reduce global emissions by 4.9 million tonnes of CO₂e by 2021, the equivalent to taking more than 1,000,000 cars off the road for a year.

Ecosystem resilience – peat rewetting and reforestation

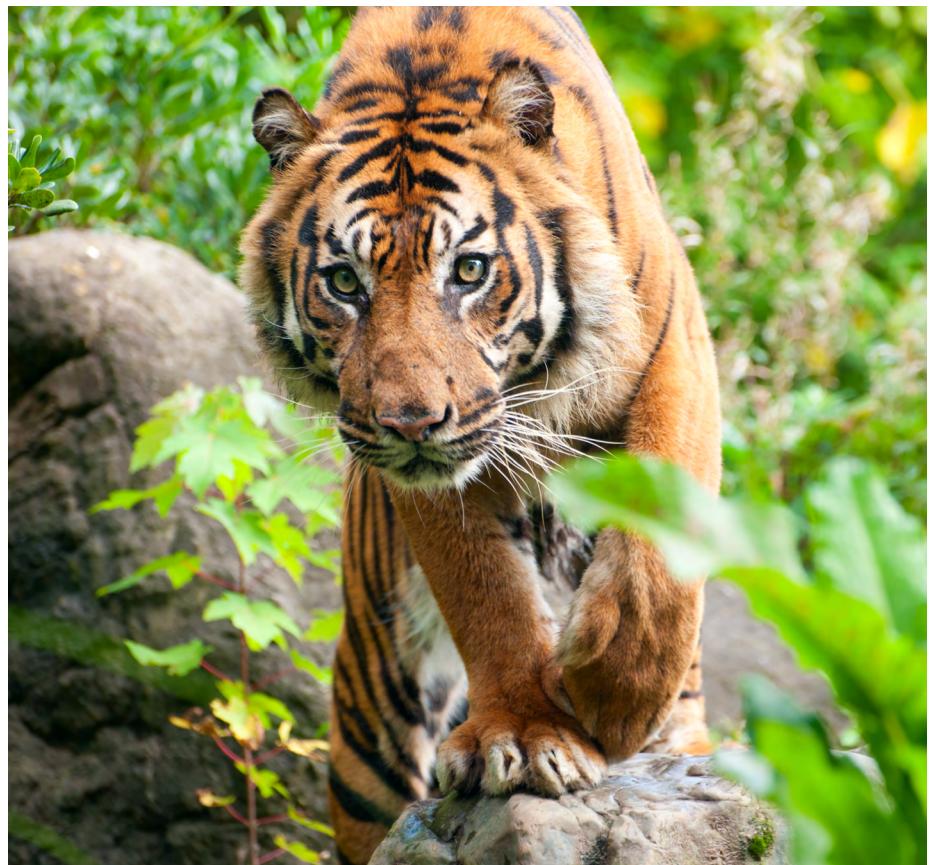
Water drainage in surrounding areas for logging and plantation development has resulted in critical degradation of peatland areas within the project. Makeshift canals within the project, once used to transport timber in illegal logging operations, have further degraded the area, leading to significant changes to the water table. Dry peatlands increase the risk of forest fires. The Sumatra Merang Peatland project is designed to prevent further degradation of the remaining forest and presents high rehabilitation and emissions reduction potential once peatlands can be restored to their natural hydrological state.

Climate finance supports several key activities to increase the resilience of the ecosystem through peat rewetting and reforestation:

- Regeneration and regrowth of standing trees:** A regeneration programme is restoring more than 22,900 hectares of degraded peatland forest with native tree and vegetation species, in what was once one of the most biodiverse regions in the country. Regrowth is already evident across the fire zone, with peat depths measured as high as 5 meters in some places.
- Fire prevention:** During a large fire in 2015, the project fire prevention team successfully saved about 6,000 hectares of forest.

CONSERVATION VALUE OF THE PROJECT

The project area is in the centre of the Merang peat dome, a contiguous High Carbon Stock peatland zone covering more than 150,000 hectares. The area is a high conservation priority area, as Merang is part of a larger peat swamp forest zone linked to Sembilang National Park in the east, Muaro Jambi peat swamp forest in the north and Berbak national park in the northwest.



The project protects Sumatran tigers.

Prevention of another large fire is of critical importance and the project is working to block canals to prevent further drainage.

Forest monitoring: Ground teams patrol the project, monitoring the health of the landscape and using technologies such as drones and satellite-based Early Warning Systems to prevent fires and illegal land clearance.

Protecting biodiversity

The project protects and regenerates an area of peatland rainforest that was once one of the most biodiverse regions in the country. The Project is partnering with the Zoological Society

of London to perform a complete biodiversity assessment and catalog of the flora and fauna. Mapping and drone surveys of the entire project area provide new data for project teams to monitor biodiversity effectively. Forest patrol teams have recently reported sightings of the Sumatran tiger, sun bears, rhinoceros hornbills, monitor lizards, common breeds of monkeys and a large variety of birds. The project also supports new livelihood opportunities that help reduce wildlife poaching.

Stakeholder engagement

Fire management and forest patrol are strengthened by regular interaction with law enforcement, Ministry of Forestry officials and local community members. Project efforts to reduce logging and rehabilitate peatlands have been received positively by local communities, as this improves the health of the landscape. Evidence of this positive relationship is seen through joint action by community members, law enforcement and project staff to destroy large machinery that was being used for illegal logging operations in the project area.

LAND TENURE

Implementing partner PT GAL holds a 25-year license for the purposes of carbon storage and sequestration. This license is renewable and gives the project partners legal primacy over commercial interests, including those who would use the area as a large-scale agro-industrial plantation, thereby avoiding complete deforestation and drainage of the entire project area.

Working with communities and building livelihoods

A key aspect of the Sumatra Merang Peatland Project is to work with surrounding communities that rely on the landscape for their livelihoods. Through a profit-sharing mechanism, climate finance invests in community development and low-carbon livelihoods programmes. Following a participatory assessment of needs in the local villages, the project supports a range of development initiatives alongside local communities that include contributing to public health campaigns, water/sanitation infrastructure, and education programmes. Public health and water/sanitation are core challenges for local villages because they are situated directly on the river and have no access to clean water or sanitation infrastructure. This means they are highly susceptible to waterborne diseases. The project's community working groups will work with community leaders to address these issues and invest funds to improve public health where appropriate.

The project is highly remote, only accessible by boat via the Medak and Kepayang rivers with the nearest village about 45 minutes away.



Climate finance contributes to developing sustainable livelihood programmes with villages near the project including fishing and smallholder cropping of Sago, Jelutung, coconut and palm fruit. The most immediate impact is direct and indirect employment for canal dam construction and forest patrols with a target to make 25% of job created for women. Many of the local people actively fish in the project area, which provides both sustenance and income. The project efforts to rewet the peatland and protect watersheds also improves breeding grounds for fish and therefore the livelihoods of many local people. The project works with local villages to develop capacity and market connections for sustainable fishing production, as small enterprises create lasting, positive change for local communities.

Technical details

The Sumatra Merang peatlands have high rehabilitation and emissions reduction potential if they can be restored to their natural hydrological state. Given the surrounding land-use context, the project is eligible to produce and certify emissions reductions under an 'avoided planned deforestation' scenario. This is based on the high likelihood that the project area would be converted for paper pulp production. Even though the area is mostly deforested, a conversion would require that the area be completely cleared of its original vegetation, planted with trees commonly used for pulp and paper production on tropical peatlands and the building of

an extensive drainage system. This would cause rapid peat decomposition, dramatically increasing greenhouse gas emissions and the risk of fire.

2019 project milestones

- Scale-up monitoring, rehabilitation and protection programmes
- Build a network of canal dams to protect the waterways as part of peat rewetting programme
- Receive verification for combined Verified Carbon Standard (VCS) and Climate, Community and Biodiversity (CCB) standard
- Target achieved verification in early 2020 for first issuance of carbon credits

Project implementing partners

The Sumatra Merang Peatland Project is implemented on the ground by PT Global Alam Lestari (GAL) and Forest Carbon. Forest Carbon is an Indonesian technical advisory company specializing in sustainability initiatives and forest carbon projects to protect tropical rainforests across Southeast Asia. PT GAL is an Indonesian company licensed to hold and manage forest concessions, specializing in restoration, ground operations and biodiversity protection.



PT. Global Alam Lestari

External standards

The Sumatra Merang Peatland Project is registered and validated by the Verified Carbon Standard (VCS) under ID 1899 and the Climate, Community and Biodiversity Standard (CCB), to the gold level for both biodiversity and for climate.



Sustainable Development Goals



The Sumatra Merang Peatland project advances many Sustainable Development Goals

Sumatra Merang Peatland Project

Impact targets for 2021

ECOSYSTEMS

22,934 ha
of peatland forest protected and restored



INCLUSIVITY

25%

of jobs
created
will be held
by women



CLIMATE

3.4m
carbon credits
(tonnes CO₂)

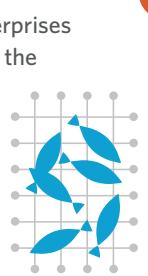


SUSTAINABLE ENTERPRISE

Strengthens local enterprises in villages surrounding the project area, such as sustainable fish production and

12 fisherman

supported through the river networks



LIVELIHOODS

Engages local people through community-led development and direct employment of

145 residents

from the local area for dam construction, forest patrols and more



SPECIES

Restores habitat for unique and endangered species such as the Sumatran Tiger, Sun Bear, Rhinoceros Hornbill and

31 species

threatened with extinction

