Natural Climate Solutions Alliance

Natural Climate Solutions in Action

# Sumatra Merang Peatland Project

| | |
|---|---|
| **Project/Program Type** | The project is an Agriculture, Forestry, and Other Land-Use (AFOLU) project under the Reduced Emissions from Degradation and Deforestation (REDD+) mechanism. More specifically, project activities are categorized as a combination of Afforestation, Reforestation, and Revegetation (ARR) and Wetlands Restoration and Conservation (WRC). Under the WRC component, project activities relate to Restoring Wetland Ecosystems (RWE). |
| **Description** | This project restores 22,934 hectares of peatland rainforest in the Merang biodiversity corridor in South Sumatra, and works with local communities to improve livelihoods and promote rural economic development. |
| **Location** | The project area is in the centre of the Merang peat dome, a one-contiguous High Carbon Stock peatland zone covering more than 150,000 hectares. The area is classified as a high conservation priority area in Indonesia. |
| **Scale** | 22,934 hectares of peatland forest restored and protected.<br><br>Future target: Scaling restoration and reforestation activities within the project zone as the landscape is gradually returned to its natural state, with a focus on upscaling ANR (assisted natural regeneration) activities in the time period from 2020 to 2025. The lifetime of the project extends to 2062. |
| **Number of Credits Sold** | 3,329,923 |

# Impacts

| | |
|---|---|
| **Impact To-Date** | To date, the project has avoided 2.6 million tonnes of $CO_2$ by protecting and restoring 22,934 hectares of degraded peatland rainforest, an area disrupted by timber extraction, illegal logging and commercial agriculture which have caused the peatland to dry out. Using innovative impact monitoring technology, the project is improving how restoration work is monitored, managed and verified. In addition, to uplift and empower local villages, the project promotes low-carbon livelihoods programmes, such as sustainable fishing production, and supports community development initiatives, including public health campaigns, water and sanitation infrastructure and education programmes. |
| **Projected Longer-Term Impact** | The long-term aim of the project is to demonstrate the impact of climate finance and improve local conservation and community development efforts. The project also aims to build and showcase the potential of impact monitoring technology to scale up conservation and restoration work across the world by bringing greater transparency and accountability to the sector.<br><br>By the completion of the project's first 10-year phase, the project aims to have achieved a reduction in $CO_2$ of 7.4 million tonnes. |

# A Rising Tide in Sumatra's Peat Swamp

In 2019, Nessie finished her training as a midwife and moved to her parents' village in Sumatra called Kepayang. The community had trouble finding staff and funding for the local health clinic. As a result, health problems were pervasive in the community. Malnutrition led to stunting in children, while polluted water from the Kepayang River caused skin disease.

Nessie began to volunteer at the clinic, delivering babies, offering primary care and teaching the importance of hygiene and clean water. When community development staff from the Sumatra Merang Peatland Project learned that Nessie was working as a volunteer, the implementing partners, Forest Carbon and Global Alam Lestari, added her to the project payroll. The health clinic has now been renovated and is consistently supplied. "The situation has gotten so much better," Nessie says.

The Sumatra Merang Peatland Project is restoring 20,000 hectares of nearby tropical wetland forest. The project sells carbon credits to companies including Chanel, L'Oreal, Zalando, BMW, Microsoft and Nestlé, and shares a significant portion of these revenues for economic and development programme in local communities. Jeffrey Chatellier had worked in conservation and development in Indonesia before joining with Global Alam Lestari to launch the project in 2016. He saw an opportunity to create sustainable long-term financing for conservation through carbon markets after the United Nations began implementing the Reducing Emissions from Deforestation and Forest Degradation initiative (REDD+).

"Before then, conservation was very much a donation-based activity," Chatellier says. "People just gave donations, and there was no true valuation of the ecosystem and what it does for the world. Payment for environmental services puts a true value on what we're doing."

The peat swamps of Indonesia creates enormous value for society by storing carbon in their soil. Peat swamp stores more carbon than any other kind of forest, and its destruction, through deforestation and fire, had made Indonesia one of the biggest sources of carbon emissions in the world.

Jeff Chatellier

Investment Director, Sumatra Merang Peatland Project

**Before then, conservation was very much a donation-based activity.**

**People just gave donations, and there was no true valuation of the ecosystem and what it does for the world. Payment for environmental services puts a true value on what we're doing.**

**22,934**
hectares of peatland rainforest restored

**2.6 million**
tonnes of $CO_2$ emissions avoided

**250,000+**
saplings planted since 2015

**89% survival rate**
of saplings planted

**Follow the progress**

Unlike some of the other large carbon projects in Indonesia, which have sought to protect large areas of standing peatland forest, Sumatra Merang covered an area whose peat swamp had already been dried out by logging canals and destroyed by fires. Forest covered only 2 percent of the Sumatra Merang area when the project started in 2016. "Our main job as a project has been restoring the hydrology to our project site," Chatellier says.

Jeff Chatellier

Investment Director, Sumatra Merang Peatland Project

**When the water level is high, the vegetation grows very well and protects the community from the dangers of fire.**

With a staff of 45, Sumatra Merang has built more than 200 peat compaction dams in the canals to restore moisture to the soil and prevent water from flowing out of the ecosystem. After just six years, the water table has risen six centimeters and forest covers more than a quarter of the project area. Animals like Sumatran tigers, gibbons and sun bears have returned. A local fisherman named Herman helped build more than 50 dams. He says larger fish are returning to the river and local communities feel safer than before. "When the water level is high, the vegetation grows very well and protects the community from the dangers of fire," he says.

Sumatra Merang has seen just one forest fire since its inception. "We use technology to monitor fire risk," Chatellier says. "It allows us to respond in real time." The project staff monitors the water table continuously with 90 Internet-of-things (IoT) sensors that send readings to a central dashboard via long-range WiFi. If water levels drop in one part of their concession, Sumatra Merang can send a team immediately to repair a broken dam or build a new one. It also uses satellites to find hot spots and infrared cameras to detect smoke.

Nessie Midwife

**The community members can now use clean water for bathing.**

**We've seen a very significant reduction in skin disease.**

Protecting the forest long-term also means providing local communities with alternatives to deforesting industries like logging, palm oil and paper pulp. Sumatra Merang has created more than 100 jobs through activities like dam construction, fire watch and forest patrol. A percentage of every carbon credit is shared with local communities to develop infrastructure, create educational scholarships and support public-health programs. It has taught sustainable fishing practices to fishermen like Herman.

With support from Sumatra Merang, Nessi's health clinic has been able to provide free antigen tests and PPE throughout the Covid-19 pandemic and has vaccinated more than 80 percent of the Kepayang community.  Not only do villagers have access to free health care, but Sumatra Merang has also built a rainwater catchment system for more than 70 households in the village. "The community members can now use clean water for bathing," Nessie says. "We've seen a very significant reduction in skin disease."

Ultimately the health of the forest and the health of local communities depend on each other. In carbon offsets, Sumatra Merang has found a mechanism to care for both for decades to come. "Forestry is not a short-term-activity," Chattelier says. "We are restoring and protecting a critical forest habitat for the long-term."

Natural Climate Solutions Alliance

## About the NCS Alliance

The NCS Alliance (NCSA) conveys the voice of businesses, NGOs and solution providers on the need to mobilize a high integrity demand for high quality Natural Climate Solutions (NCS). The Alliance focuses on identifying opportunities and barriers to investment in the NCS voluntary carbon market and serves as a forum for knowledge sharing and technical capacity building to ensure natural climate solutions reach their full potential in abating climate change, while also tackling nature loss and socio-economic issues. NCS in Action was established to showcase how NCS are making a real difference in the world today.

For more information visit www.naturalclimatesolutionsalliance.org and follow us on LinkedIn.

## Statement of Acknowledgment

The NCS in Action are testimonials designed to highlight the benefits for people and nature associated with NCS projects and programs financed through the voluntary carbon market. The NCS Alliance strongly believes that the voluntary carbon market is necessary for financing NCS projects and programs. It is critical however that it rests on the integrity of the climate benefits, i.e. the ability of credits to truly represent real and verifiable carbon reductions.

The NCS Alliance recognizes the importance of staying up-to-date with the latest science and best practices as carbon-crediting programs evolve. We acknowledge that there have been challenges with certain methodologies and that improvements have not always been made as quickly as necessary. However, we believe that this is a valuable learning-by-doing process and that scaling up NCS is crucial in achieving global 1.5C goals. In support of this, the NCS Alliance will continue to highlight projects and programs in this space while also advocating for consistent improvement in standards and methodologies. For more information about how and when these methodologies are updated see Verra, Plan Vivo, ACR, ART.

NCS in Action is made possible with generous funding support from the We Mean Business Coalition.

## Disclaimer

Inclusion of an NCS project or program in the NCS in Action program does not imply a recommendation to purchase, trade or retire credits associated with the project or program.

The NCS Alliance and its members take no responsibility for the purchase, trade or retirement of credits from these projects and programs. Instead, it recommends that individuals, companies and other organisations procuring credits as part of their climate strategies conduct their own independent due diligence to validate the quality and environmental integrity of their purchases.

The NCS Alliance secretariat in no way benefits financially or by other means from the selection.

Author: Ben Crair

Project coordination: Giulia Carbone (WBCSD); Jennicca Gordon (WBCSD)

Citation: NSCA (2023) NCS in Action - Samutra Merang Peatland Project. Natural Climate Solutions Alliance.

Copyright: © WBCSD, May 2023.

WORLD ECONOMIC FORUM

wbcsd