

The Ecosystem-based Approach/Nature-Based Solutions for Climate Smart Livelihoods in Mangrove Landscapes (NASCLIM), Indonesia

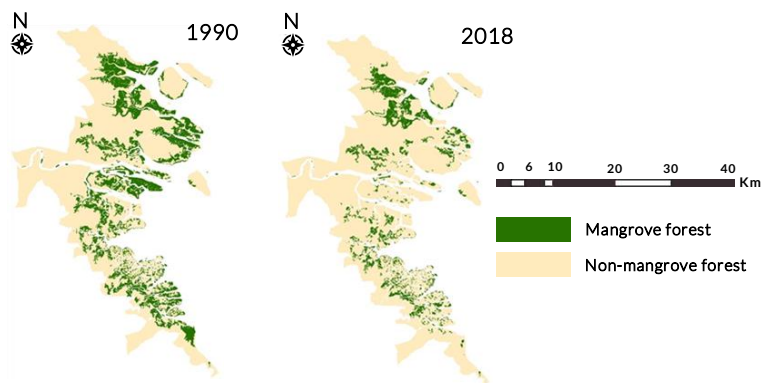
Project Summary

Designed to support the Government of Indonesia's commitment to combating rapid deforestation, the NASCLIM project aims to rejuvenate degraded mangroves and protect thriving forests at the Kayan-Sembakung Delta in North Kalimantan and the Mahakam Delta in East Kalimantan, through ecosystem-based approaches/ nature-based solutions. Over the past few decades, aquaculture pond development has significantly reduced the delta ecosystems' carrying capacities at these deltas, causing the degradation of mangrove forests on the coast.

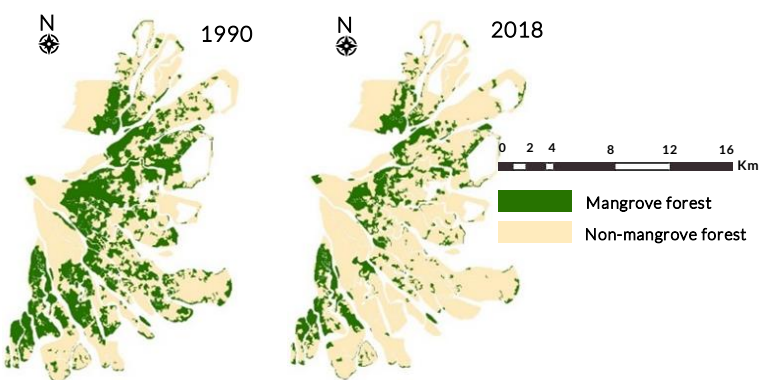
By restoring natural tidal flows and promoting sustainable fishing and aquaculture, the project will strengthen coastal resilience and empower vulnerable communities, especially women. It also seeks to equip policymakers with tools to drive policy reforms that incentivize long-term mangrove protection. NASCLIM will serve as a scalable model, inspiring sustainable change in mangrove restoration across Indonesia and beyond.

The visual below depicts the rate of deforestation of mangrove forests in both East and North Kalimantan over the last 30 years

Kayan-Sembakung Delta, North Kalimantan



Mahakam Delta, East Kalimantan



Project Outcomes

- 270,000 Individuals in coastal communities benefitting from the project, 40% of which are women
- 66,000 ha Mangrove ecosystems rehabilitated
- 10,000 ha Intact mangroves protected
- 11,2 MtCO₂e (estimated from mangrove rehabilitation) Greenhouse gas emissions reduced or avoided

Project Objectives

This project aims to enhance the livelihoods of coastal communities while contributing to climate change mitigation. Avoiding deforestation and protecting mangrove forests from further degradation will contribute to reducing greenhouse gas emissions.

Women will make up 40% of participants receiving training on improving livelihoods and rehabilitation approaches. Women from these communities will focus on raising awareness of the social, environmental, and economic values of their access to mangrove resources. They will also emphasize their participation in landscape and seascape governance, their legal and customary rights, their vulnerability to gender discrimination, and their local knowledge of mangrove management practices.

Context and Background

Mangroves are one of the most productive and biologically complex ecosystems on Earth.



24% of the world's mangroves
24% are in Indonesia*



Covering a total of **3.36 million** hectares of mangroves



Mangroves contribute **USD 1.5 billion** annually to Indonesia's economy**



50% loss in mangrove cover over the past 30 years



Major causes: aquaculture, agriculture, and urban expansion

The loss of mangroves not only affects the environment, leading to the loss of fish nurseries, increased pollution, and diminished coastal protection but also disrupts a habitat crucial for terrestrial and marine biodiversity.

The government has assigned the Peatland and Mangrove Restoration Agency (BRGM) the responsibility of accelerating the rehabilitation of 600,000 hectares of mangroves from 2021 to 2024. By preventing mangrove conversion, the country could also reduce its land-use emissions by 30%.

Mangrove rehabilitation in Indonesia costs about USD 3,900 per hectare, above the global median of USD 3,500*. Low success rates increase risks and drive-up costs, making many efforts to struggle to achieve lasting results. NASCLIM strives for natural regeneration to occur, resulting in the coast thriving as an organic regeneration space for mangroves with all its benefits to coastal communities, with a more cost-effective approach.

*Ministry of Environment and Forestry, 2023

**World Bank, 2022



A woman carrying a basket of crops
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Mangrove restoration for sustainable livelihoods

NASCLIM operates in six villages: four in North Kalimantan and two in East Kalimantan. These villages are home to 19,339 people (9,289 females and 10,050 males). This does not include the thousands of pond owners and workers, along with their families, who may live outside the villages.

This project will collaborate with key stakeholders to influence mangrove protection and rehabilitation practices at the national, provincial, district, and village levels, as well as with individual pond owners and fisherfolk to achieve:

- Enhanced policymaking by the government that focuses on protecting and rehabilitating mangrove ecosystems through a gender-responsive approach, supported by ongoing monitoring efforts.
- Landscape partnerships that promote sustainable practices while benefiting local communities and preserving mangrove ecosystems.
- Enhanced climate-smart livelihoods that connect to the sustainable management of mangrove habitats and biodiversity.

Teguh Prio Adi Sulisty, Head of Working Group on Program and Budget, Peatland and Mangrove Restoration Agency (BRGM)

“NASCLIM is the only mangrove project I’m currently handling, with full community involvement in designing and implementing ecosystem-based approaches or naturebased solutions. This approach, if well-managed, will make NASCLIM a highly sustainable project and a model for mangrove protection and rehabilitation in Indonesia.”



A group of people sitting next to mangrove seeds
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NASCLIM Secretariat

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