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Mangrove Conservation for Climate, People, and Nature

Cà Mau, Vietnam

The Mekong Delta in southern Vietnam is of great importance to the climate, people, and nature. Mangrove forests grow along the 720-kilometer coastline, providing protection against flooding and storms as well as helping to reduce erosion. They also play a key role in climate protection by storing about five times more carbon than tropical forests. However, high population density and intensive aquaculture are taking a heavy toll on the mangroves: In just under 25 years, their area in the delta has shrunk by more than two and a half times. Together with the local population, we are protecting the mangroves, promoting more sustainable aquaculture methods, and improving local incomes and climate resilience.



Reforestation: 105 ha
No Clearing: 20 ha
Protection: 1,375 ha

MANGROVE CONSERVATION & MANAGEMENT



Reforestation: 8-13k t CO₂e
Avoided deforestation: 1,8-3,5k t CO₂e
Protection: 65-124k t CO₂e

CARBON SEQUESTRATION



Climate change adaptation: 6,000 people
Increased income: 3,120

IMPROVED LIVING CONDITIONS



1,500 ha

IMPROVED ECOSYSTEM
FUNCTIONS
(BIODIVERSITY)

Mangrove Conservation for the Climate, People, and Nature

Background

The Mekong Delta in southern Vietnam is of great economic importance: for example, 17 million people there generate around 60 percent of the country's aquaculture exports. Mangrove forests also grow along the delta's 720-kilometer coastline; these forests not only serve as habitats for a wide variety of animal species but also play a vital role in climate protection. They store up to five times more CO₂ per unit area than tropical forests, provide natural protection against flooding and storms, slow erosion, and reduce salt intrusion from seawater into wetlands and soils.

But the mangroves are under pressure. In just under 25 years, their area in the delta has shrunk by more than two and a half times. The main reason is deforestation. Many aquaculture operators are poorly trained and achieve low yields using outdated and unsustainable farming methods. To increase their income, they cut down mangroves on their land for timber or clear additional areas to expand their aquaculture operations.

Project Idea

In close collaboration with aquaculture operators and other local stakeholders, approximately 1,500 hectares of mangroves are being better protected and reforested. Among other things, a compensation system is being developed to incentivize the avoidance of deforestation. At the same time, measures are being implemented to promote more sustainable and higher-yield aquaculture methods, with the goal of increasing the local population's income and their resilience to climate change. The long-term goal is to protect and preserve the Cà Mau mangrove ecosystem—Vietnam's largest remaining mangrove forest—which is vital for the climate, people, and nature. The project is taking a landscape approach (see box).

The Landscape Approach

A landscape refers to a large, contiguous geographic area in which ecological, social, and economic systems interact with one another. In such landscapes, diverse land uses coexist—such as agriculture, nature conservation, forestry, and settlements. When applying the landscape approach, competing land-use demands are balanced in a way that benefits both human well-being and the environment. It is a holistic and integrated method for managing natural resources based on local needs, with the goal of promoting sustainable development, climate resilience, and biodiversity. This approach takes land-use conflicts into account while simultaneously tapping into potential for synergies and shared solutions.

Project Objectives (Outcomes)

1. Climate:
 - Mangrove reforestation on 105 ha, which is estimated to sequester an additional 8–13k t CO₂e.
 - Avoiding deforestation on 20 ha, thereby keeping 1.8–3.5k t CO₂e stored.
 - Enhanced protection across 1,375 ha, keeping 65–124k t CO₂e sequestered.
2. People: 6,000 people are better adapted to climate change; 3,120 can improve their income.
3. Nature: Biodiversity is increasing across 1,500 ha.

Measures

For objective 1:

- Collaborative development and implementation of mangrove reforestation and management plans
- Raising public awareness of the value of mangroves
- Development of a compensation system for refraining from clearing

For objective 2:

- Capacity building and technical support for the local population to apply more sustainable and higher-yield aquaculture methods (e.g., mixed-species farming)
- Establishment of 60 demonstration farms for improved methods
- Development of an Approach to Compensate Aquaculture Operators for Ecosystem Services Provided

For objective 3:

- Collaborative development and implementation of mangrove reforestation and management plans
- Raising public awareness of the value of mangroves
- Development of a monitoring system to adequately assess the state of biodiversity.



"Since I started using improved aquaculture methods and planting new mangroves, there has been more shade, and the shrimp and fish are growing better, so the yield has doubled compared to before."

Mr. Le Minh Nhut - aquaculture operator from a previous WWF project in Cau Mau, Vietnam

Project duration

2+5 years, from January 2026 to December 2032

Project costs

Total costs: CHF 800,000 + CHF 2,000,000 (TBD)

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