# WeForest

**2024 Project Update**

# Casamance Mangroves Restoration Project

Restoration of Mangroves with Communities (MANCO), Casamance Delta

**Casamance, Senegal**
Blue Carbon

Timeline:
**2020 - 2027**

Targeted ecosystem:
**Mangroves**

**KBA**
KEY BIODIVERSITY AREAS

**Parc National de Basse Casamance #6853**
**Marine Protected Areas:** Niamone-Kalounaye, MP Kassa Balantacounda, Uyofaal Kassa-Bandialm, Blouf-Fogny

## Project management and M&E team

Main implementing partner:
**WeForest, Oceanium, Eclosio**

**Germaine Neyra**
WeForest Country Manager Senegal

**Thibaut Vandervelden**
WeForest M&E Manager, Senegal

**Saliou Diop**
WeForest M&E officer, Senegal

**Madické Seck**
MANCO project manager, Oceanium

**Louis Mendy**
MIPRO project manager, Eclosio

**See the full team at:**
www.weforest.org/about-us/#our-team

# Project story

The estuarine complexes of Casamance and Sine Saloum are home to vast mangrove forests that serve important ecological and socioeconomic functions. In addition to their great diversity of flora and fauna, mangroves directly provide timber and non-timber products to communities, protect the coastline, and have provided livelihoods for generations.

However, around 41 hectares of mangrove in this area were lost per year between 1965 and 2017. Over the last 20 years, efforts have been made to conserve and restore this ecosystem throughout Senegal. Despite this, pockets of degradation exist in several places because of anthropogenic and climatic factors.

Together with the Sine Saloum Mangroves Restoration Project, the Casamance Mangroves Restoration Project aims to improve the social value of mangroves in rural communities in 17 municipalities in Senegal, known as the MANCO programme. The programme aims to restore 10,020 hectares of mangrove and improve the livelihoods of riverine communities. Its associated carbon project aims to create economic and employment opportunities in local mangrove value chains.

## ⚠ Key challenges in the landscape

**Hydro-agricultural developments**

**Persistent drought**

**Over-exploitation of oysters, shrimps and fish**

**Use of mangrove wood**

**Sand extraction**

**Land silting**

**Climate change**

## ✅ Our integrated approach

**Improve forest governance and stewardship through:**
- Training local communities in sustainable forest and mangrove management, including reforestation techniques to enhance their capacity to manage natural resources independently.
- Supporting the ministry of environment in mangrove forest management to ensure better handling of environmental issues at the national and local level.

**Conserve and restore the forest through:**
- Full planting of Rhizophora sp. and Avicennia germinans mangrove trees.

**Strengthening forest-friendly livelihoods and behaviors through:**
- Creating an inclusive market for producers in mangrove areas through activities such as capacity building, developing strategic partnerships, establishing eco-friendly, fair and transparent mangrove value chains and enhancing synergies with other mangrove-related initiatives.
- Including communities in income-generating planting activities through benefit-sharing from carbon revenues and direct payment to communities involved in reforestation activities.

# A long-term vision
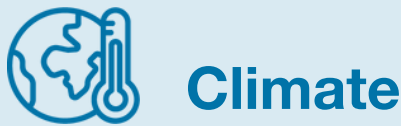
## Climate

The MANCO Programme will contribute to both climate mitigation and adaptation: increasing mangroves to sequester carbon while improving inland protection from severe weather events.

## Nature

Restoring Casamance will protect biodiversity and secure critical ecosystem services like water health and seafood availability. Improved management will enhance habitat resilience, ensuring the mangroves continue to sustain both people and wildlife.

## People

Strengthened governance and mangrove-friendly livelihoods will ensure communities see mangroves as an asset: one that provides resources while being sustainably managed. Through this, the project reduces deforestation-driven income reliance while securing long-term economic stability.

# Outcomes

By integrating these interventions, the project will:

- **Reverse** deforestation trends by restoring 7020 hectares of degraded mangroves.

- **Restore** mangrove-related ecosystem services.

- **Support** national authorities on mangrove ecosystem management.

- **Improve** the livelihoods of project communities by strengthening their access to the market and by giving employment opportunities by restoration activities.

- The **long-term** impact of our work will benefit people, nature and climate

# Theory of Change

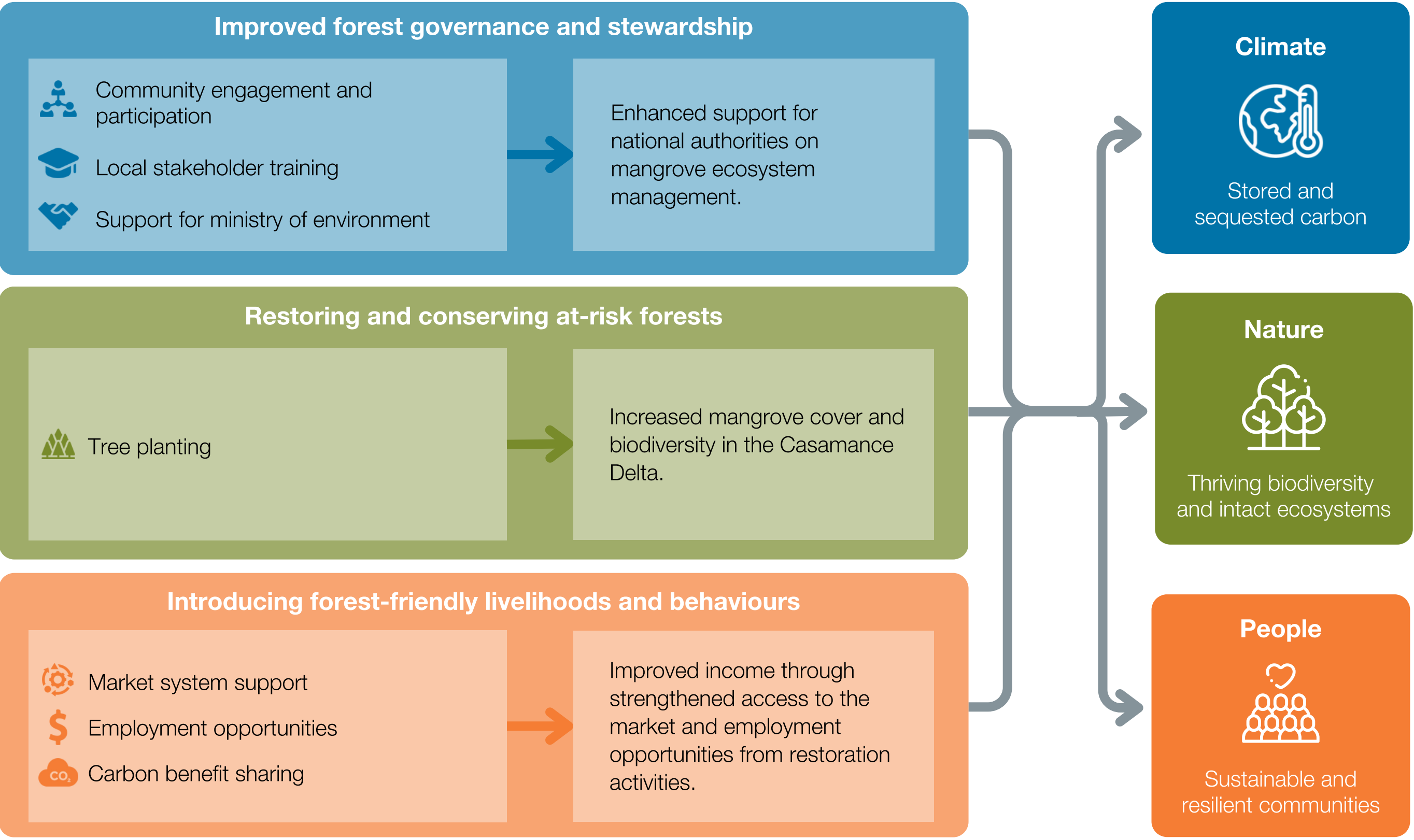**Existing problems in the forest and landscape**

- Unsustainable agriculture
- Over-exploitation of resources
- Land silting

**Risks**

- Drought
- Climate change

**WeForest Interventions**

## Improved forest governance and stewardship

- Community engagement and participation
- Local stakeholder training
- Support for ministry of environment

**Project outcomes**

Enhanced support for national authorities on mangrove ecosystem management.

## Restoring and conserving at-risk forests

- Tree planting

Increased mangrove cover and biodiversity in the Casamance Delta.

## Introducing forest-friendly livelihoods and behaviours

- Market system support
- Employment opportunities
- Carbon benefit sharing

Improved income through strengthened access to the market and employment opportunities from restoration activities.

**Long term impact**

**Climate**
Stored and sequestered carbon

**Nature**
Thriving biodiversity and intact ecosystems

**People**
Sustainable and resilient communities

# 2024 Major Achievements



The project intervention was scaled up from the 9 nine "communes" engaged in the pilot phase to 16, and new products were selected for livelihood activities, including shrimp, onion and rice. This is additional to the salt, honey and fish that were already part of the 1st phase, so synergies between these activities will be explored.

First phase enterprise groups received training, coaching and value chain support in business planning, marketing, aquaculture, salt qualification study, market prospection and more.

Seven enterprise groups involved in honey, madd fruit (Saba senegalensis) and oysters have seen their turnover increase by 40%.

Participatory guarantee systems for sustainable honey and oysters are under development; committees have been set up and protocols have been drafted.
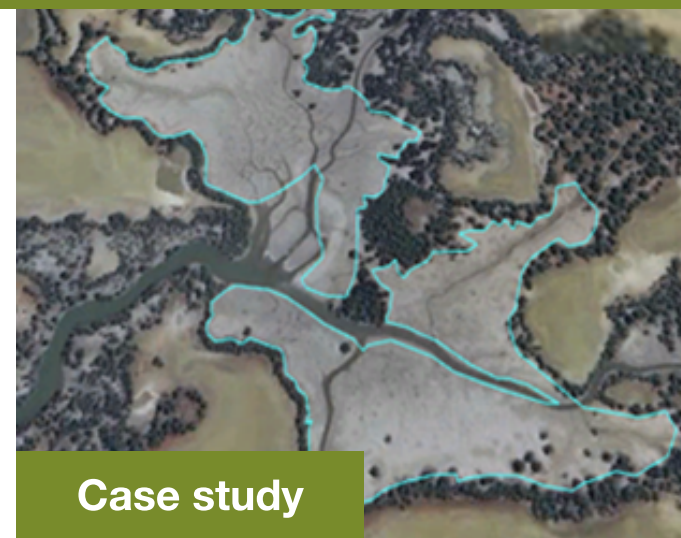


**Case study**

As part of the 2024 mangrove reforestation campaign, our organization implemented a rigorous site selection methodology combining satellite analysis via Google Earth (conducted in early 2024), field missions (April–May 2024), and final validation based on precise environmental criteria such as salinity, pH, soil texture, and the presence of natural regeneration. This process was carried out in close collaboration with local communities and Marine Protected Area agents, resulting in the validation of 1,204.69 hectares in Casamance and 104.95 hectares in the Sine-Saloum. Data collection was fully digitized using the KoboCollect platform, including the use of a propagule traceability tool (used between July and October 2024) and a plantation density control system. This integrated approach reinforces the quality and transparency of our operations and establishes a strong foundation for sustainable, science-based reforestation.

# 2024 activity update

## Improved forest governance and stewardship

- A workshop was held to present the results from Phase 1 of the MANCO program and validate Phase 2.
- Support was given to the Ministry of Environment for the mapping of Senegal's mangrove forests.
- The project HSSE management plan was updated and new security measures implemented.
- M&E Standard Operating Procedures (SOPs) were improved.
- Partners and community leaders were trained in first aid.

## Restoring and conserving at-risk forests

- **227 hectares** of mangrove trees (Rhizophora sp.) were planted.
- A post-planting monitoring campaign assessed the quality and progress of full reforestation efforts in **3,577 hectares** of 2020-2023 Rhizophora plantations.

## Introducing forest-friendly livelihoods

- Project facilitators received training on entrepreneurship and ADM approaches (market systems analysis and market for the poor).
- **Socialization meetings** were organized in the seven new project intervention communes, with 217 participants attending.
- Key value chains to be supported by Phase 2 of the project were selected, including tilapia, honey, onion, rice, poultry farming, and pig sales.
- An entrepreneurial pathway was established, leading to the formation of **7 business groups**, representing 11 enterprises, receiving training on business plan development, business strategy creation, and company formalization.
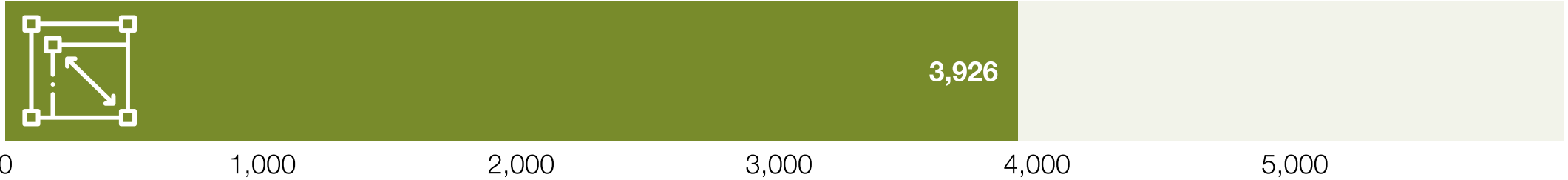- **21 enterprise groups** from Phase 1 and 5 from Phase 2 were formalized

# Progress tracker

| 2020 | 2027 |
|------|------|

**Anticipated CO2 sequestered in the future from project activities**
25,956

**Hectares planted, conserved and restored**
3,926

0 — 1,000 — 2,000 — 3,000 — 4,000 — 5,000

**Number of trees conserved and restored**
9,133,166

0 — 2,000,000 — 4,000,000 — 6,000,000 — 8,000,000 — 10,000,000 — 12,000,000
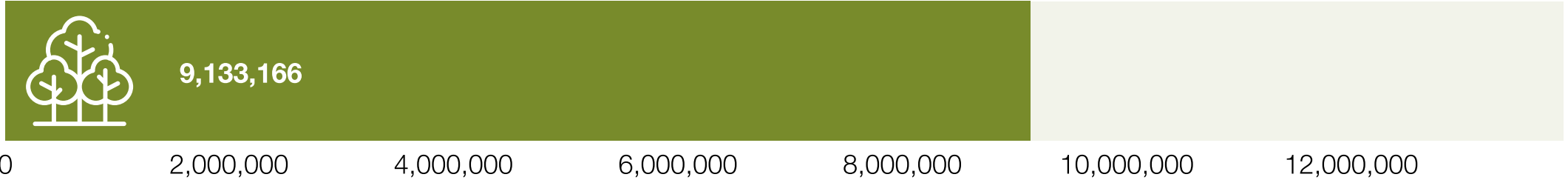
**Number of households engaged in alternative livelihoods activities**
201
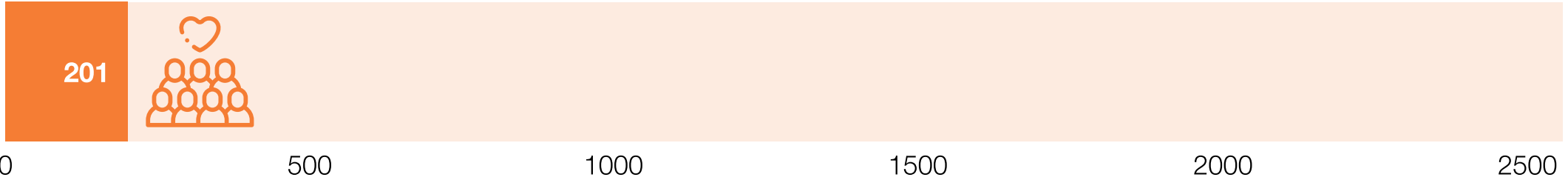
0 — 500 — 1000 — 1500 — 2000 — 2500

**Trees planted to date**
19,898,265   11,198
**Total: 19,909,463**

**Woody species in project to date**
15   6
**Total: 21**

■ For forest conservation and restoration   ■ For forest-friendly livelihoods

## ⚠️ 2024 Challenges

In 2024, there were challenges due to overlapping project zones with other initiatives, especially around ensuring fair benefit-sharing and avoiding duplication. Going forward, coordination with other carbon and restoration projects will be improved.

Although local authorities' involvement is crucial to enforce conservation efforts, there is still a need for capacity building and institutional support to ensure effective governance.

A major lesson from 2024 was that the regular monitoring of reforestation outcomes enabled rapid adjustments in site selection, planting methods, and maintenance techniques to improve long-term reforestation success.

## ≫ Looking ahead to 2025

2025 will be an evaluation year, focusing on assessing the project's impacts on biodiversity through monitoring activities related to birds, mollusks, fish, and water quality. Additionally, the impacts on both the environment and communities will be evaluated, including market access support activities, awareness-raising, and training initiatives. The amount of carbon stored will also be assessed in preparation for the first verification audit of the project according to VCS+CCB standards.

# Supporters & Partners

## 2024 project partners

**Oceanium** Association focused on the plantation and monitoring activities, and awareness-raising activities for project stakeholders.

**Eclosio** were involved in the project's livelihoods component of the project.

**Ministry of Environment**, Sustainable Development, and Ecological Transition of Senegal focused on project global monitoring, law enforcement and mangrove forest conservation.

## Contact us

Visti **www.weforest.org** or for more information or email: **contact@weforest.org**

# How we measure and forecast our impact

## Baseline

For the sake of simplicity, the progress bars in this report show a baseline of zero. This represents the concept that the area covered by WeForest forest and landscape restoration (FLR) activities was zero; thus the associated trees conserved and restored, carbon stored and households impacted through WeForest intervention was also zero.

In reality, when a WeForest project begins, our Monitoring, Evaluation and Learning team undertakes a detailed survey on forest structure and regeneration through establishing Permanent Monitoring Plots, and conducts an extensive questionnaire on livelihoods, to establish meaningful baseline values. You can read more about our full MEL activities here.

## Hectares planted, conserved and restored

**Progress up to 2024**
Verifiable cumulative total since the project began of all mapped intervention sites, also known as polygons, of:
**1)** Conservation forest areas, such as forest reserves
**2)** Restoration forest areas, such as Assisted Natural Regeneration and planting areas
**3)** Agroforestry areas on community/farm land

**End of Project Target**
Target number based on the potential area of land able to be conserved, restored and planted in the project area under the known and expected conditions at project start. However, it is subject to change based on unforeseen opportunities or challenges that may arise.

## Anticipated tons of CO2 to be sequestered through project activities

**Progress up to 2024**
Extrapolated tons of CO2 calculated from the measured areas of different types of land use (for example forest or agroforestry) under "Hectares of forest planted, conserved and restored" to date, and the average amount of projected long-term CO2 per hectare provided from literature review for each land use type in their locations. Although totalled, please note the methodology for calculating these CO2 projections are specific to land-use type, and span a period corresponding to the expected time taken for the trees to reach maturity, which varies between locations.

**End of Project Target**
As above, but using the target (and not current) number of hectares planted, restored and conserved and their respective area totals as a parameter for calculations. As this parameter is subject to change, the associated CO2 target may also change over time.

# Number of trees conserved and restored*

**Progress up to 2024**
Extrapolated number of trees calculated from the measured areas of different land use types (for example conservation areas, restoration areas or agroforestry) under "Hectares planted, conserved and restored" to date, and the average tree densities observed for each land-use type when mature, known through our MEL activities or scientific literature.

**End of Project Target**
As above, but using the target (and not current) number of "Hectares of forest planted, restored and conserved" and their respective area totals as a parameter for calculations. As this parameter is subject to change, the associated trees conserved and restored target may also change over time.

*Estimations based on average numbers per hectare

# Trees planted to date (2024)

**Total**
Actual counted number of planted seedlings and saplings of woody (tree and shrub) species in the project to date.

**Trees planted for forest-friendly livelihoods and behaviors**
Only woody species directly planted for livelihood improvement. This also includes woody fruit, fodder & timber trees, and woody cash crops, exclusively planted on community or farm land.

**Trees planted for forest conservation and restoration**
Only woody species that were directly planted for ecological reasons, aiding restoration of the natural forest ecosystem.

# Woody species in project to date (2024)

**Total**
Actual observed number of woody (tree and shrub) species:
- Regenerating in the conservation/restoration zones (i.e. in the Permanent Monitoring Plots) and
- Planted, either for restoration or livelihood improvement
- Growing as mature trees in the conservation/restoration zones (i.e. in the permanent monitoring plots).
- Please note, these numbers are not exhaustive and the true species richness is likely to be higher.

**Tree species for forest-friendly livelihoods and behaviors**
Only woody species directly planted for livelihood improvement. This also includes woody fruit, fodder and timber trees, and woody cash crops, exclusively planted on community or farm land.

**Tree species for forest conservation and restoration**
The woody species observed in the project area that are not used for livelihood improvement purposes. Where species are used for both livelihood improvement and restoration (which is sometimes the case, as we use native species as much as possible), they have been counted under 'forest-friendly livelihoods and behaviors'.

# Terminology

**Conservation**
Where native forest canopy cover is still intact, we focus on protecting the forest from any threats and disturbances, such as overgrazing, unsustainable wood extraction and fire.

**Restoration**
Assisted Natural Regeneration (ANR): Where there is reduced forest cover but high potential for natural regeneration, we aim to accelerate natural recovery, typically through preventing soil degradation, reducing competition with weeds, and protecting young trees.

**Tree planting**
Where there is reduced forest cover and little regeneration potential, we actively plant native trees at a density that corresponds with the regeneration potential.

**Agroforestry and tree crops**
Where agricultural landscapes exist, WeForest promotes the planting of trees for livelihood improvement. These trees can be used either for direct consumption or sale (fruits, timber, fuelwood) or to support other crops or livestock (agroforestry). Native tree species are prioritized but, where necessary, non-native species may be used.

# Mammal and bird species sighted to date

Numbers are included where we have a good level of biological monitoring, for example using camera traps or audio devices - please note that numbers are unlikely to capture the full species richness of the project area and that the absence of reporting does not imply the absence of species.

# Other notes

WeForest works in close cooperation with local partner organisations, institutions, community-based organizations and local people. Therefore, our impact can never be fully separated from the work of our partners. WeForest acknowledges that the presented impact numbers cannot be solely attributed to our work, but is also supported through the hard work contributed by all our local partners.